Lupton Windows

for STANDARD OPENINGS

Reduce Building Costs

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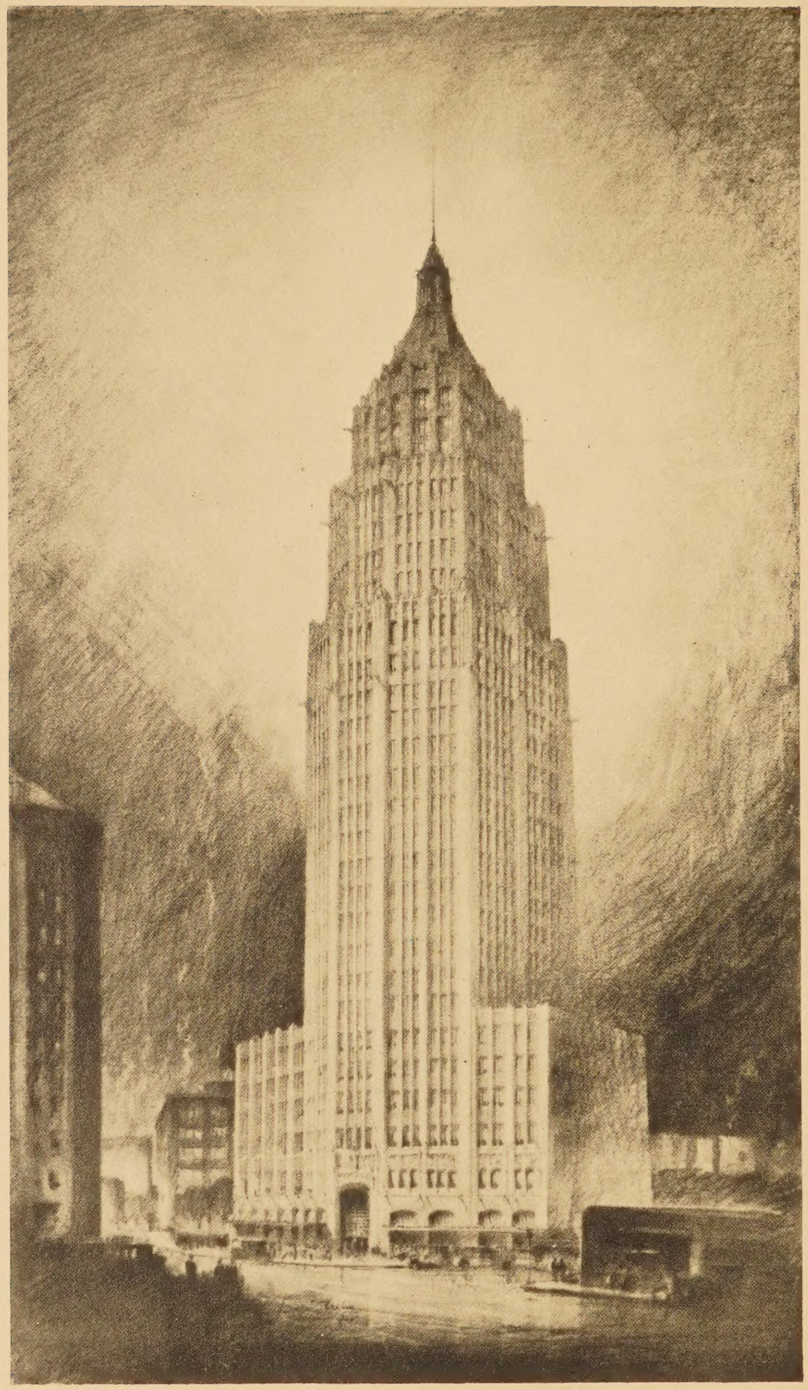

SMITH-YOUNG TOWER, SAN ANTONIO, TEXAS. ARCHITECTS— A. B. AND R. M. AYRES; CONTRACTORS— MC KENZIE CONSTRUCTION COMPANY. 1450 LUPTON COMBINATION CASEMENTS WERE USED IN THIS MODERN 31 STORY BUILDING.

Lupton Windows

for

STANDARD OPENINGS

CATALOGUE No. P-50
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DAVID LUPTON'S SONS COMPANY
ALLEGHENY AVENUE AND TULIP STREET, PHILADELPHIA
BRANCH OFFICES AND SALES REPRESENTATIVES IN PRINCIPAL CITIES

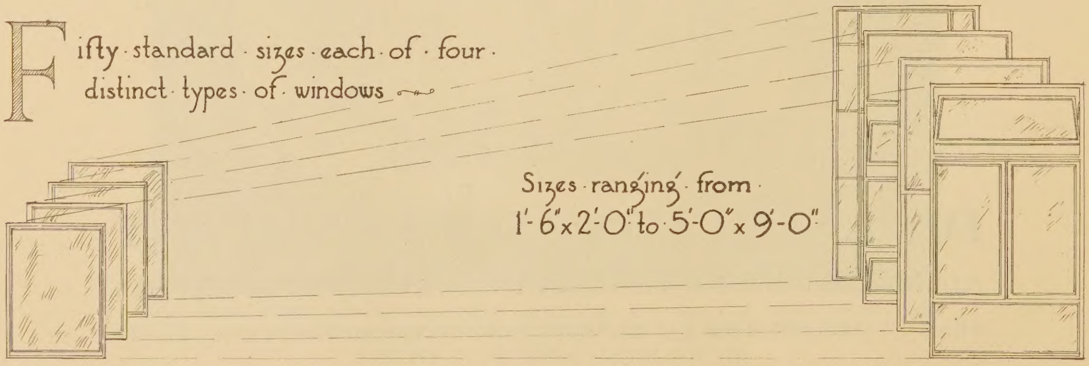
FIFTY SIZES EACH IN FOUR TYPES
OF LUPTON STANDARDIZED STEEL WINDOWS

FOR OFFICE BUILDINGS, HOTELS,
APARTMENT HOUSES, HOSPITALS
AND GENERAL USE

Applying advanced principles of standardization, approved by the Division of Simplified Practice of the United States Department of Commerce, we have designed four types of standardized Lupton Steel Windows interchangeable through a range of fifty sizes. These windows permit unlimited architectural expression and are available at moderate cost for use in office buildings, hotels, apartment houses, hospitals and similar high-grade structures.

Architects have long accepted standard designs in steel and other structural members, radiators, trim and many other features in the field of design and construction. In line with this practice, and as another step toward producing better windows at lower cost, Lupton is making steel windows to fit standard masonry opening dimensions.

This new step in standardization is an important factor, not only in laying out window openings, but also in ordering shades, screens, awnings, radiators, and radiator covers. All such accessories are much more readily supplied and replaced by owners or building managers when Lupton standard window dimensions are used.


Fifty · standard · sizes · each · of · four · distinct · types · of · windows
Sizes · ranging · from · 1'-6"x2'-0" to 5'-0"x9'-0"

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LUPTON COMBINATION CASEMENTS

A NEW HIGH STANDARD OF BALANCED VENTILATION, AND POSITIVE CONTROL OF AIR MOVEMENTS WITHOUT DRAFT

These windows, by their unique design, bring a new high standard of natural ventilation to multiple-story buildings. They are the only windows that afford such positive air control. A horizontal inward-opening ventilator located at the bottom of the window admits fresh air without draft. Above, forming the upper portion of the window, are two side-projected ventilators. By closing one of these and slightly opening the other against the breeze, an air movement is induced which siphons used air out of the window. Thus, Lupton Combination Casements provide easily controlled, balanced ventilation through every window opening.

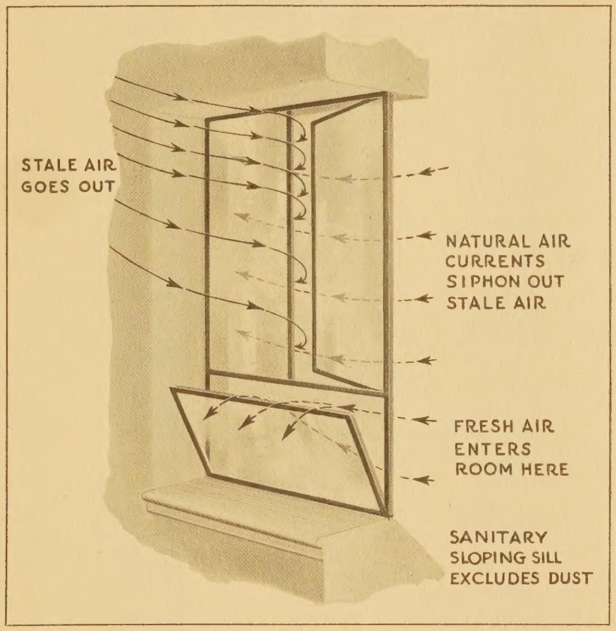

STALE AIR GOES OUT
NATURAL AIR CURRENTS SIPHON OUT STALE AIR
FRESH AIR ENTERS ROOM HERE
SANITARY SLOPING SILL EXCLUDES DUST

DIAGRAM ABOVE SHOWS HOW BALANCED VENTILATION IS ASSURED THROUGH THE USE OF LUPTON COMBINATION CASEMENTS. DOTTED ARROWS SHOW NATURAL FRESH-AIR CURRENTS. SOLID ARROWS SHOW STALE AIR MOVING OUTWARD BY MEANS OF SIPHON ACTION FULLY DESCRIBED IN TEXT.

Another advantage of these windows is that they do not require the wind-shields and weather-stripping common to most types of windows, yet when used with a 45° sloping sill the design and position of the ventilator planes prevents the entrance of dirt and dust.

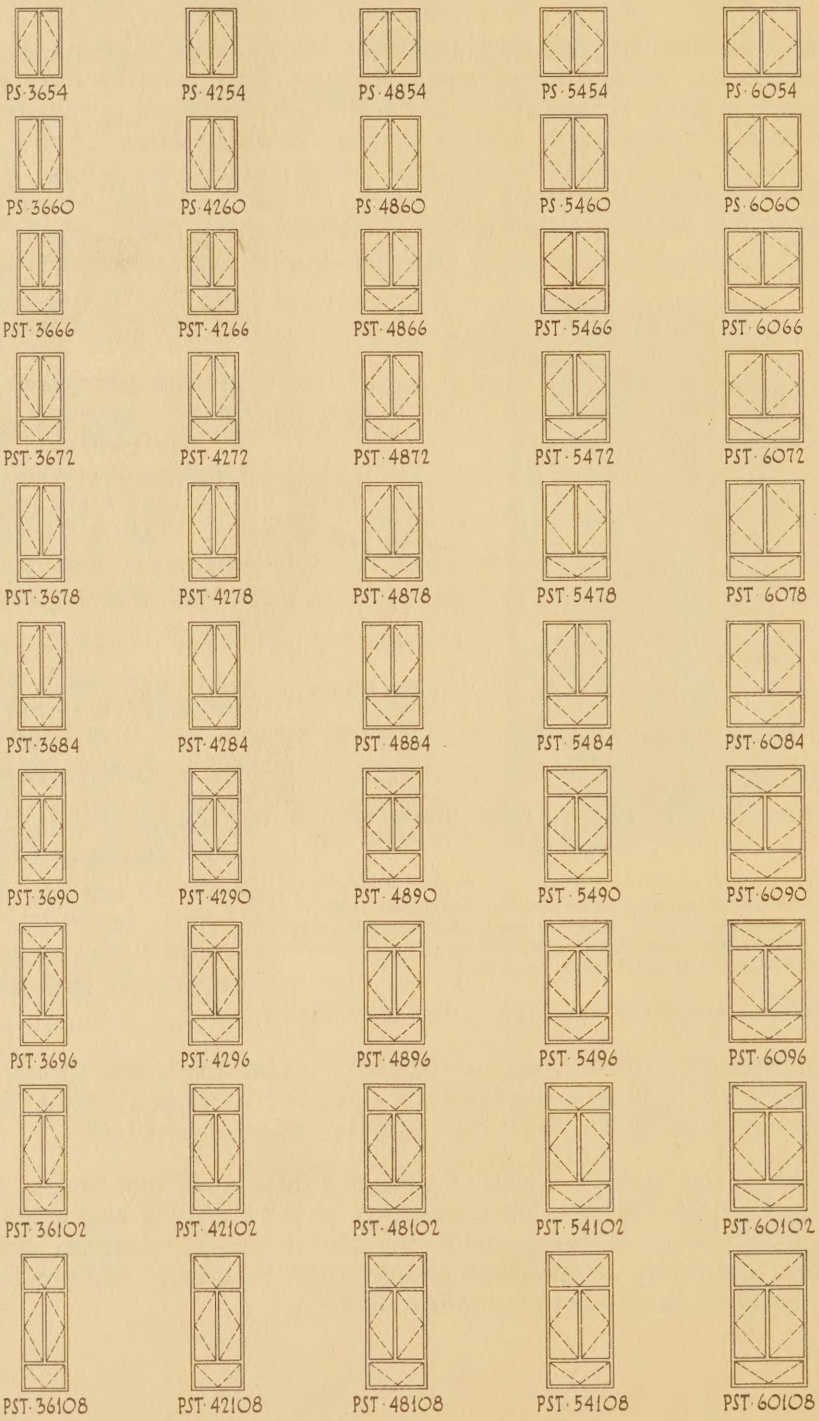
Ventilators with projected type movement, originated by Lupton in 1911, are furnished with a bronze friction shoe which eliminates all sill hardware. Bronze hardware as illustrated on page 24 is furnished. Standard windows are outside putty glazed. Glazing angles for outside use furnished at extra cost. See specifications on page 23. Details of construction are given on page 7, and sizes on page 6.

When screens are required they may be placed on the inside, and special side opening vents may be hinged and mechanically operated without opening the screens. A screen is readily placed outside for in-at-top opening ventilators.

In providing the highest degree of efficiency in natural ventilation, as well as in lighting, Lupton Combination Casements produce cleaner and more comfortable interiors, and better working and living conditions. In addition, their heat conservation, simplicity of operation and economy of upkeep, add prestige and value to any building in which they are installed.

COMBINATION · PROJECTED · CASEMENTS
100 PER · CENT · VENTILATED

· STANDARD · TYPES · AND · SIZES ·

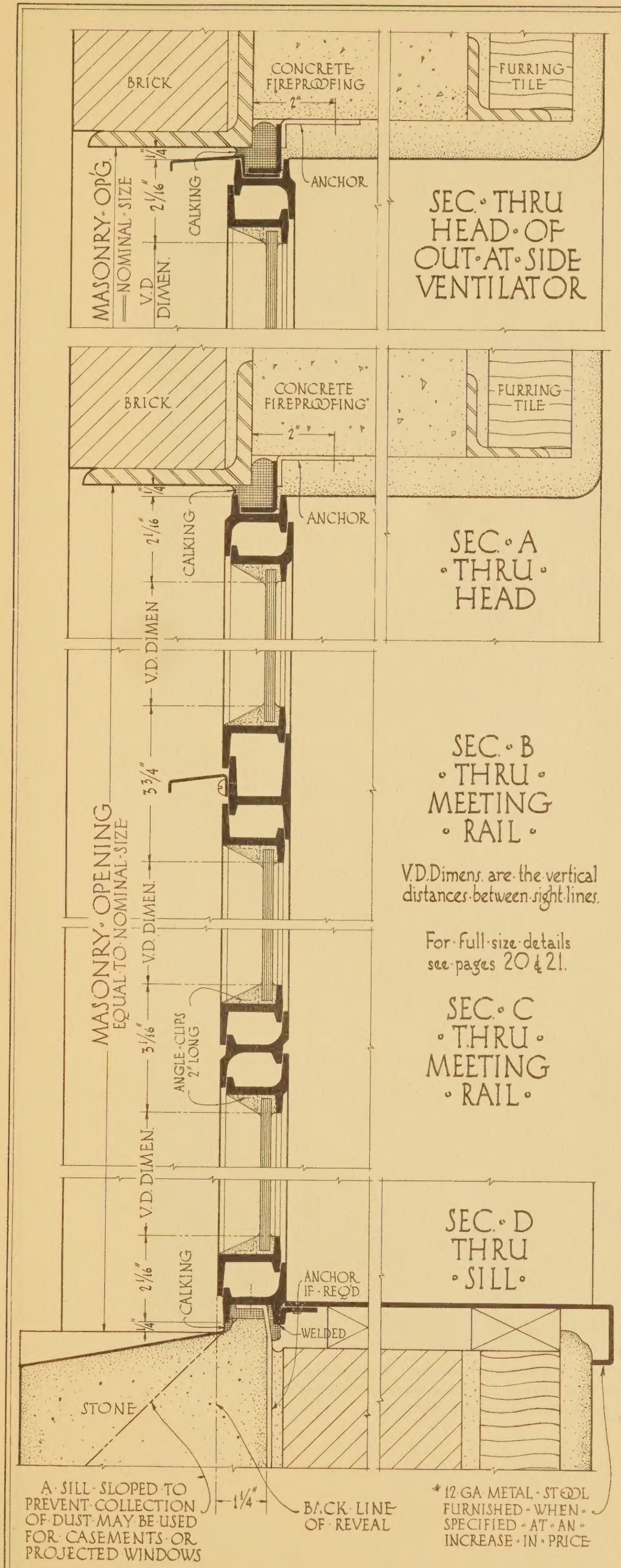


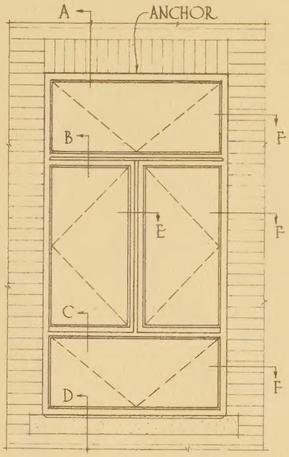
NOMINAL · SIZE *	GLASS · SIZE	3'-0" 15" 33¼"	3'-6" 18" 39¼"	4'-0" 21" 45¼"	4'-6" 24" 51¼"	5'-0" 27" 57¼"	V.D. DIMEN. SEE · DETAILS · FOR MEASURE · POINTS
4' ~ 6"	50"	PS·3654	PS·4254	PS·4854	PS·5454	PS·6054	4' ~ 1⅜"
5' ~ 0"	56"	PS·3660	PS·4260	PS·4860	PS·5460	PS·6060	4' ~ 7⅜"
5' ~ 6"	41¾" 17¾"	PST·3666	PST·4266	PST·4866	PST·5466	PST·6066	3' ~ 5 5/32" 1' ~ 5 5/32"
6' ~ 0"	47¾" 17¾"	PST·3672	PST·4272	PST·4872	PST·5472	PST·6072	3' ~ 11 5/32" 1' ~ 5 5/32"
6' ~ 6"	53¾" 17¾"	PST·3678	PST·4278	PST·4878	PST·5478	PST·6078	4' ~ 5 5/32" 1' ~ 5 5/32"
7' ~ 0"	53¾" 23¾"	PST·3684	PST·4284	PST·4884	PST·5484	PST·6084	4' ~ 5 5/32" 1' ~ 11 5/32"
7' ~ 6"	19" 41¾" 19⅝"	PST·3690	PST·4290	PST·4890	PST·5490	PST·6090	1' ~ 6 23/64" 3' ~ 5 5/32" 1' ~ 7 3/64"
8' ~ 0"	19" 47¾" 19⅝"	PST·3696	PST·4296	PST·4896	PST·5496	PST·6096	1' ~ 6 23/64" 3' ~ 11 5/32" 1' ~ 7 3/64"
8' ~ 6"	19" 53¾" 19⅝"	PST·36102	PST·42102	PST·48102	PST·54102	PST·60102	1' ~ 6 23/64" 4' ~ 5 5/32" 1' ~ 7 3/64"
9' ~ 0"	25" 53¾" 19⅝"	PST·36108	PST·42108	PST·48108	PST·54108	PST·60108	2' ~ 0 23/64" 4' ~ 5 5/32" 1' ~ 7 3/64"

*Nominal · Size · equals · the · Masonry Opening · required · for · one · unit.

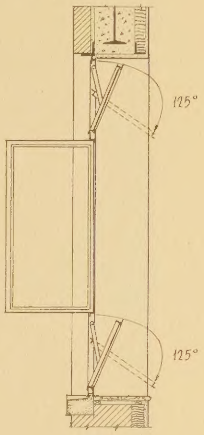
COMBINATION PROJECTED · CASEMENTS 100 · PER · CENT · VENTILATED

SCALE · FOR · DETAILS ~ 3" = 1'~0"

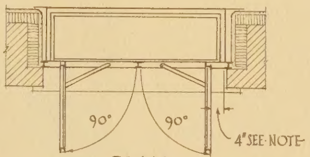

BRICK
CONCRETE FIREPROOFING
2"
FURRING TILE
ANCHOR
CALKING
1/4"
2 1/16"
MASONRY · OP'G — NOMINAL · SIZE
V.D. DIMEN.
SEC · THRU HEAD · OF OUT · AT · SIDE VENTILATOR
BRICK
CONCRETE FIREPROOFING
2"
FURRING TILE
ANCHOR
CALKING
1/4"
2 1/16"
SEC · A · THRU · HEAD
V.D. DIMEN
3 3/4"
SEC · B · THRU · MEETING · RAIL ·
V.D. Dimens. are the vertical distances between sight lines.
For full size details see pages 20 & 21.
MASONRY · OPENING EQUAL · TO · NOMINAL · SIZE
V.D. DIMEN
3 1/16"
ANGLE · CLIPS 2" LONG
SEC · C · THRU · MEETING · RAIL ·
V.D. DIMEN
2 1/16"
CALKING
1/4"
ANCHOR IF · REQ'D
WELDED
SEC · D THRU · SILL ·
STONE
1 1/4"
A · SILL · SLOPED · TO PREVENT · COLLECTION OF · DUST · MAY · BE · USED FOR · CASEMENTS · OR PROJECTED · WINDOWS
BACK · LINE OF · REVEAL
* 12 GA · METAL · STOOL FURNISHED · WHEN · SPECIFIED · AT · AN · INCREASE · IN · PRICE



ELEVATION
VENTILATORS · CLOSED



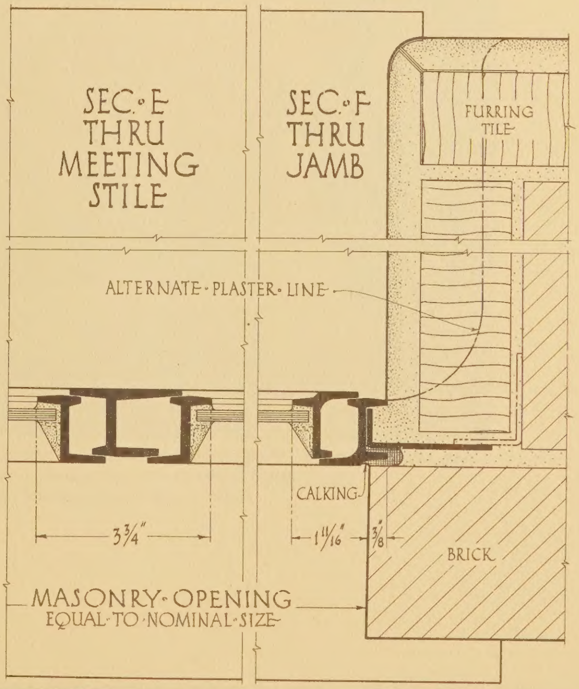
SECTION
VENTILATORS · OPEN

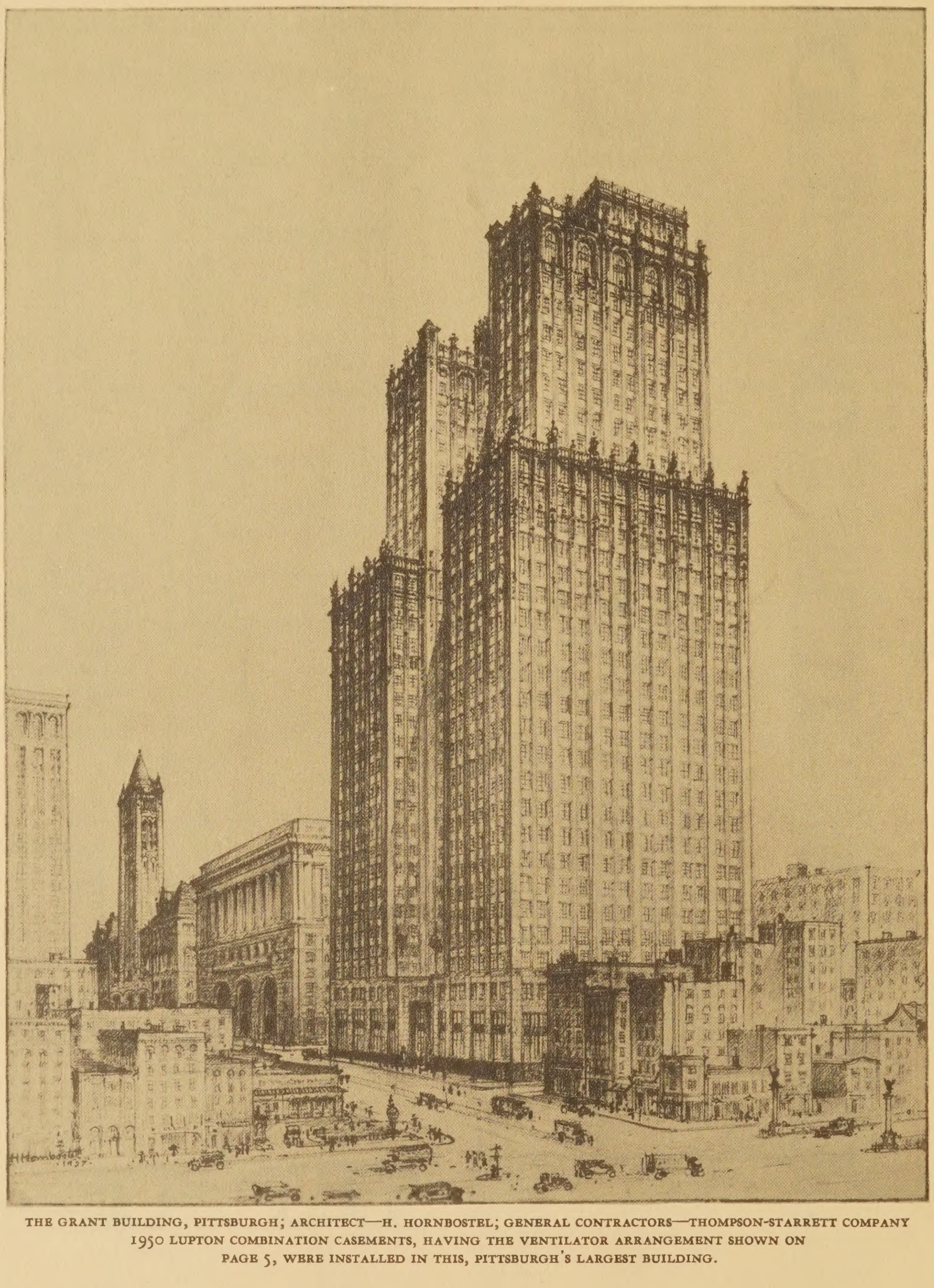


PLAN
VENTILATORS · OPEN

NOTE
In · at · top ventilators · open ~ approximately · 125° · to · permit cleaning · from · inside.
Out · at · side · ventilators have · approximately 4 inches clearance · at · jamb when open · to · permit · cleaning from · inside the · building ~

SCALE, 1/4" — 1'-0"


SEC · E THRU MEETING STILE
SEC · F THRU JAMB
FURRING TILE
ALTERNATE · PLASTER · LINE
CALKING
3 3/4"
1 1/16"
3/8"
BRICK
MASONRY · OPENING EQUAL · TO · NOMINAL · SIZE



THE GRANT BUILDING, PITTSBURGH; ARCHITECT—H. HORNBOSTEL; GENERAL CONTRACTORS—THOMPSON-STARRETT COMPANY
1950 LUPTON COMBINATION CASEMENTS, HAVING THE VENTILATOR ARRANGEMENT SHOWN ON
PAGE 5, WERE INSTALLED IN THIS, PITTSBURGH'S LARGEST BUILDING.

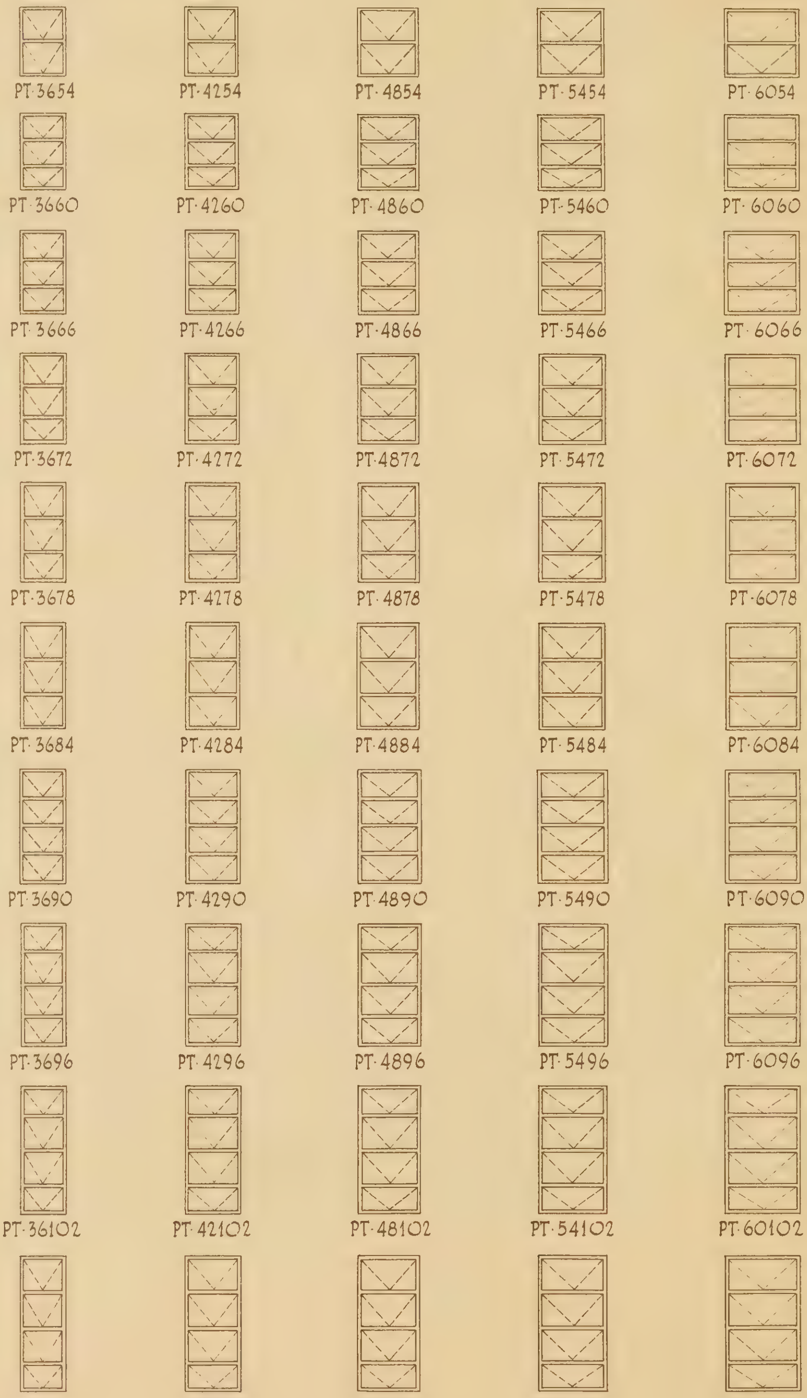
LUPTON IN-AT-TOP CASEMENTS

MAINTENANCE of strict privacy, adequate ventilation without draft and abundant lighting are features of these windows. They are particularly desirable for Medical Institutions, Art Museums, Hospitals, Solariums and similar buildings. Single unit screens are readily applied outside, and are never removed except for painting. Shades are also easily applied.

Bronze hardware as illustrated on page 24 is regularly furnished. A bronze friction shoe holds ventilators at any reasonable degree of opening and eliminates all sill hardware. These windows are outside putty glazed. Details of construction are given on pages 11 and 13, and sizes on pages 10 and 12. Glazing angles for outside use furnished at extra cost. See specifications on page 23.

PROJECTED • CASEMENTS
100 PER • CENT • VENTILATED – IN • AT • TOP

• STANDARD • TYPES • AND • SIZES •

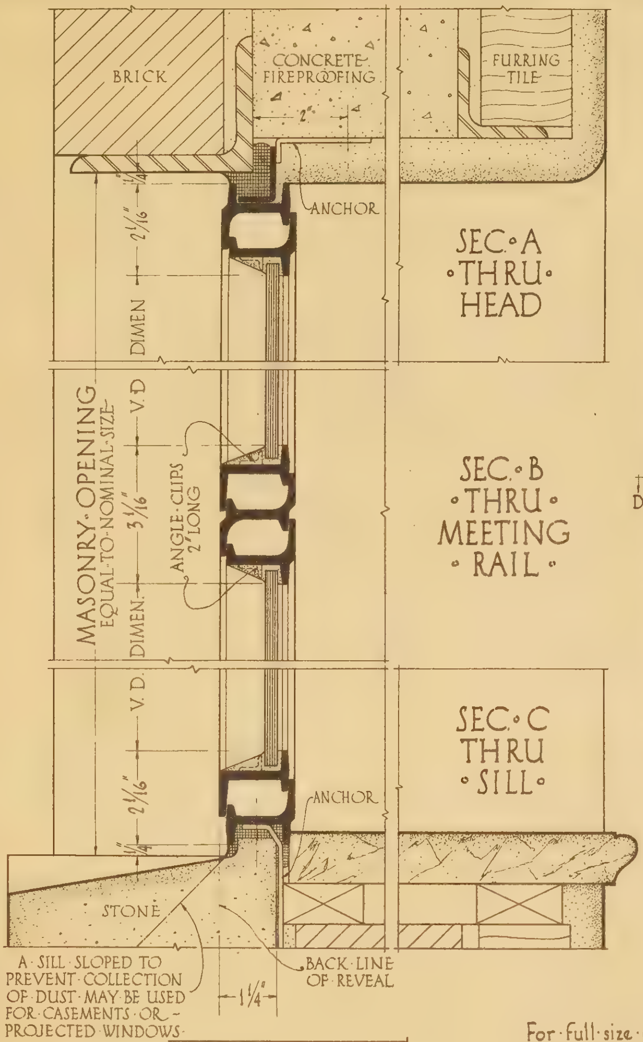


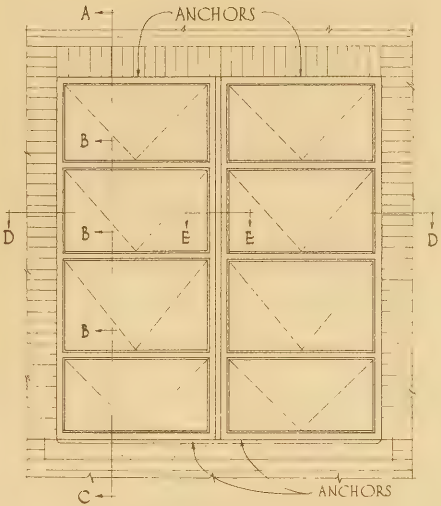
NOMINAL • SIZE * →		3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	V.D. DIMEN. SEE • DETAILS • FOR MEASURE POINTS
	GLASS • SIZE →	33 1/4"	39 1/4"	45 1/4"	51 1/4"	57 1/4"	
4' – 6"	23 3/4" 23 3/4"	PT • 3654	PT • 4254	PT • 4854	PT • 5454	PT • 6054	1' – 11 5/32" 1' – 11 5/32"
5' – 0"	17 3/4" 17 3/4" 15 1/2"	PT • 3660	PT • 4260	PT • 4860	PT • 5460	PT • 6060	1' – 5 5/32" 1' – 5 5/32" 1' – 2 15/16"
5' – 6"	19 5/8" 19 5/8" 17 3/4"	PT • 3666	PT • 4266	PT • 4866	PT • 5466	PT • 6066	1' – 7 3/64" 1' – 7 3/64" 1' – 5 5/32"
6' – 0"	22 5/8" 22 5/8" 17 3/4"	PT • 3672	PT • 4272	PT • 4872	PT • 5472	PT • 6072	1' – 10 3/64" 1' – 10 3/64" 1' – 5 5/32"
6' – 6"	25 5/8" 25 5/8" 17 3/4"	PT • 3678	PT • 4278	PT • 4878	PT • 5478	PT • 6078	2' – 1 3/64" 2' – 1 3/64" 1' – 5 5/32"
7' – 0"	25 5/8" 25 5/8" 23 3/4"	PT • 3684	PT • 4284	PT • 4884	PT • 5484	PT • 6084	2' – 1 3/64" 2' – 1 3/64" 1' – 11 5/32"
7' – 6"	19 5/8" 19 5/8" 19 5/8" 19 5/8"	PT • 3690	PT • 4290	PT • 4890	PT • 5490	PT • 6090	1' – 7 3/64" 1' – 7 3/64" 1' – 7 3/64" 1' – 7 3/64"
8' – 0"	19 5/8" 22 5/8" 22 5/8" 19 5/8"	PT • 3696	PT • 4296	PT • 4896	PT • 5496	PT • 6096	1' – 7 3/64" 1' – 10 3/64" 1' – 10 3/64" 1' – 7 3/64"
8' – 6"	19 5/8" 25 5/8" 25 5/8" 19 5/8"	PT • 36102	PT • 42102	PT • 48102	PT • 54102	PT • 60102	1' – 7 3/64" 2' – 1 3/64" 2' – 1 3/64" 1' – 7 3/64"
9' – 0"	25 5/8" 25 5/8" 25 5/8" 19 5/8"	PT • 36108	PT • 42108	PT • 48108	PT • 54108	PT • 60108	2' – 1 3/64" 2' – 1 3/64" 2' – 1 3/64" 1' – 7 3/64"

* Nominal • Size • equals • Masonry Opening • required • for • one • unit.

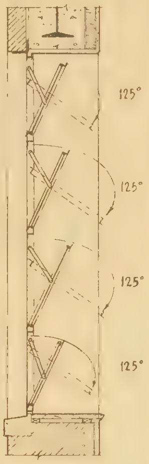
PROJECTED CASEMENTS 100 PER CENT VENTILATED IN AT TOP

SCALE FOR DETAILS ~ 3" = 1'-0"





ELEVATION
VENTILATORS CLOSED



SECTION
VENTILATORS OPEN

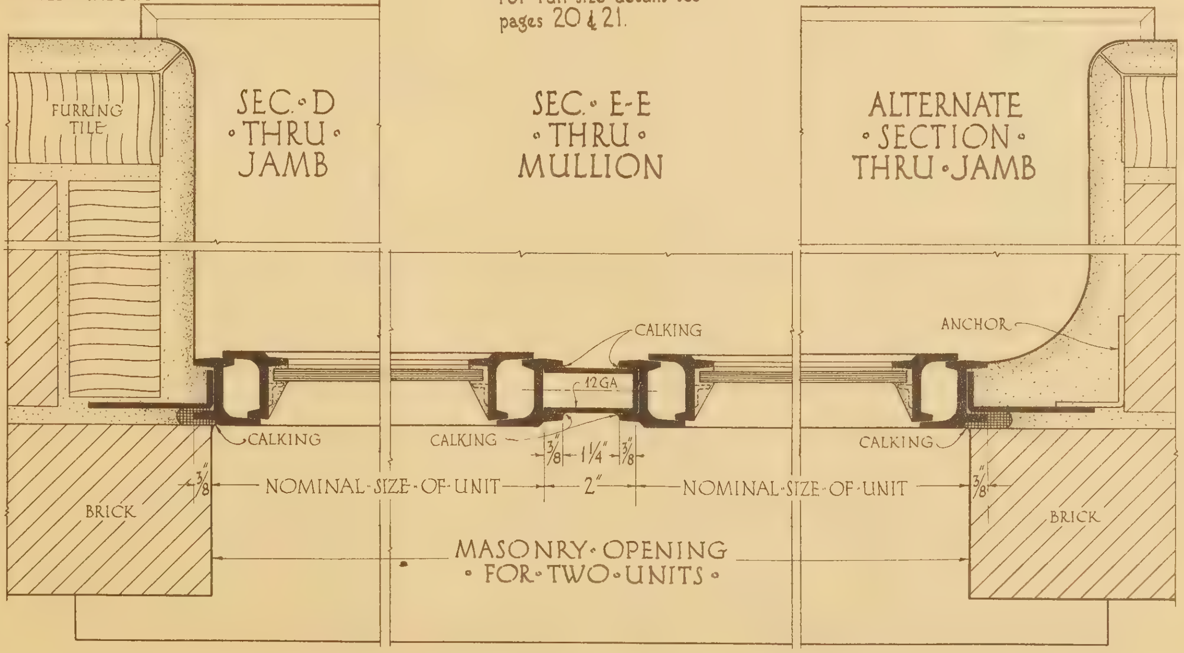
SCALE - 1/4" = 1'-0"

• NOTE •

Ventilators open approximately 125° to permit cleaning to be done from inside the building.

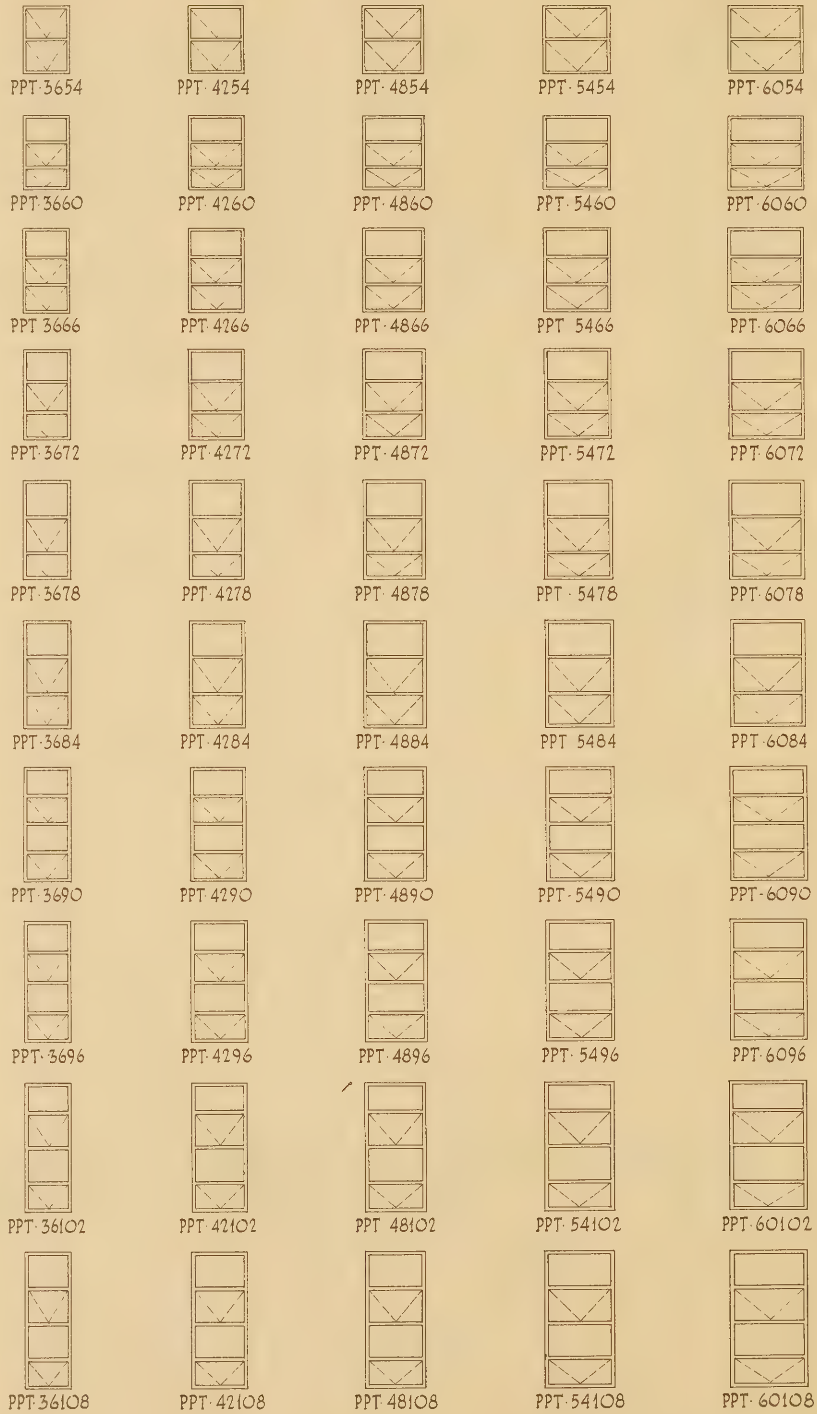
V.D. Dimens. are the vertical distances between sight lines.

For full size details see pages 20 & 21.



PROJECTED · CASEMENTS
PART · VENTILATED - IN · AT · TOP

LISTED · SPECIAL · TYPES · IN · STANDARD · SIZES



NOMINAL · SIZE *	GLASS · SIZE	3'-0" 33 1/4"	3'-6" 39 1/4"	4'-0" 45 1/4"	4'-6" 51 1/4"	5'-0" 57 1/4"	V.D. DIMEN. SEE · DETAILS · FOR MEASURE · POINTS
4' – 6"	23 3/4" 23 3/4"	PPT·3654	PPT·4254	PPT·4854	PPT·5454	PPT·6054	1' – 11 5/32" 1' – 11 5/32"
5' – 0"	19" 17 3/4" 15 1/2"	PPT·3660	PPT·4260	PPT·4860	PPT·5460	PPT·6060	1' – 6 13/32" 1' – 5 5/32" 1' – 2 15/16"
5' – 6"	20 7/8" 19 5/8" 17 3/4"	PPT 3666	PPT·4266	PPT·4866	PPT 5466	PPT·6066	1' – 8 19/64" 1' – 7 3/64" 1' – 5 5/32"
6' – 0"	23 7/8" 22 5/8" 17 3/4"	PPT·3672	PPT·4272	PPT·4872	PPT·5472	PPT·6072	1' – 11 19/64" 1' – 10 3/64" 1' – 5 5/32"
6' – 6"	26 7/8" 25 5/8" 17 3/4"	PPT·3678	PPT·4278	PPT·4878	PPT·5478	PPT·6078	2' – 2 19/64" 2' – 1 3/64" 1' – 5 5/32"
7' – 0"	26 7/8" 25 5/8" 23 3/4"	PPT·3684	PPT·4284	PPT·4884	PPT 5484	PPT·6084	2' – 2 19/64" 2' – 1 3/64" 1' – 11 5/32"
7' – 6"	20 7/8" 19 5/8" 21 5/8" 19 5/8"	PPT·3690	PPT·4290	PPT·4890	PPT·5490	PPT·6090	1' – 8 19/64" 1' – 7 3/64" 1' – 9 3/64" 1' – 7 3/64"
8' – 0"	20 7/8" 22 5/8" 24 5/8" 19 5/8"	PPT·3696	PPT·4296	PPT·4896	PPT·5496	PPT·6096	1' – 8 19/64" 1' – 10 3/64" 2' – 0 3/64" 1' – 7 3/64"
8' – 6"	20 7/8" 25 5/8" 27 5/8" 19 5/8"	PPT·36102	PPT·42102	PPT 48102	PPT·54102	PPT·60102	1' – 8 19/64" 2' – 1 3/64" 2' – 3 3/64" 1' – 7 3/64"
9' – 0"	26 7/8" 25 5/8" 27 5/8" 19 5/8"	PPT·36108	PPT·42108	PPT·48108	PPT·54108	PPT·60108	2' – 2 19/64" 2' – 1 3/64" 2' – 3 3/64" 1' – 7 3/64"

* Nominal · Size · equals · Masonry Opening · required · for · one · unit.

PROJECTED · CASEMENTS PART · VENTILATED IN · AT · TOP

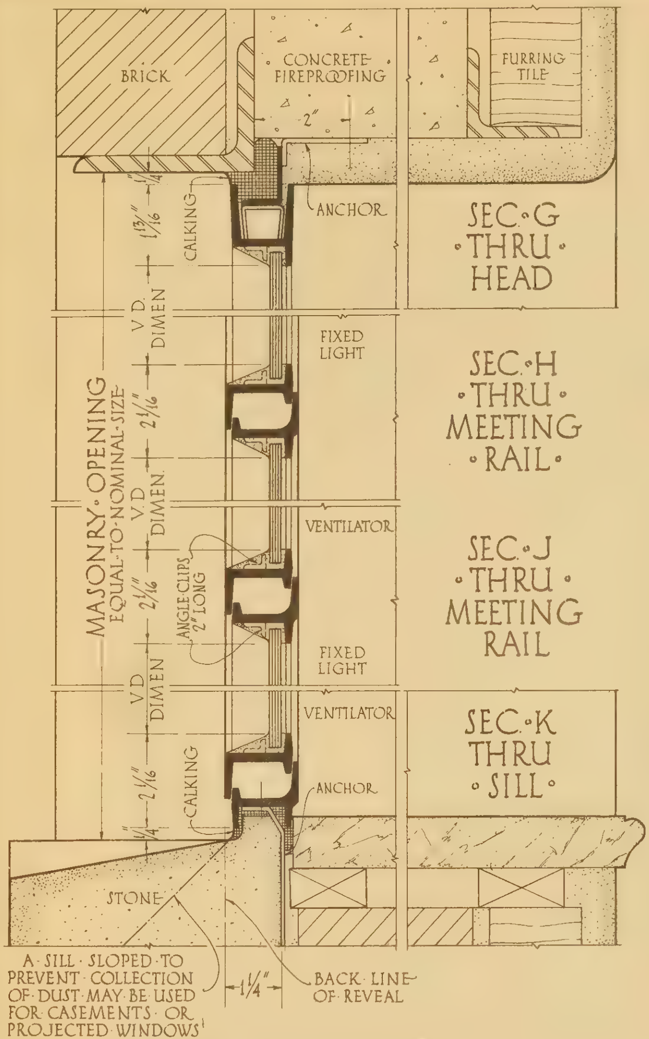
SCALE · FOR · DETAILS ~ 3″ = 1′-0″

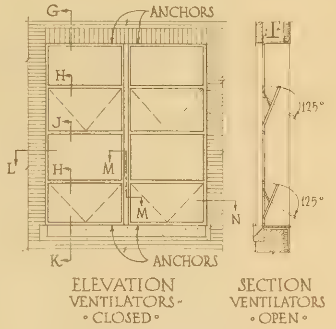
· NOTE ·

In · at · top · ventilators open · approximately 125° to · permit · cleaning · to · be · done · from · inside · the — building

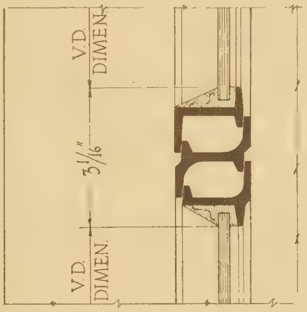
V.D. Dimens. are the — vertical · distances · between sight · lines.

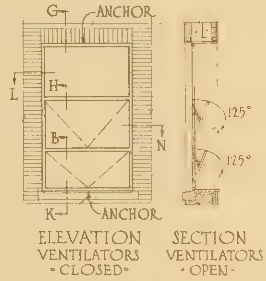
For · full · size · details see · pages 20 & 21.



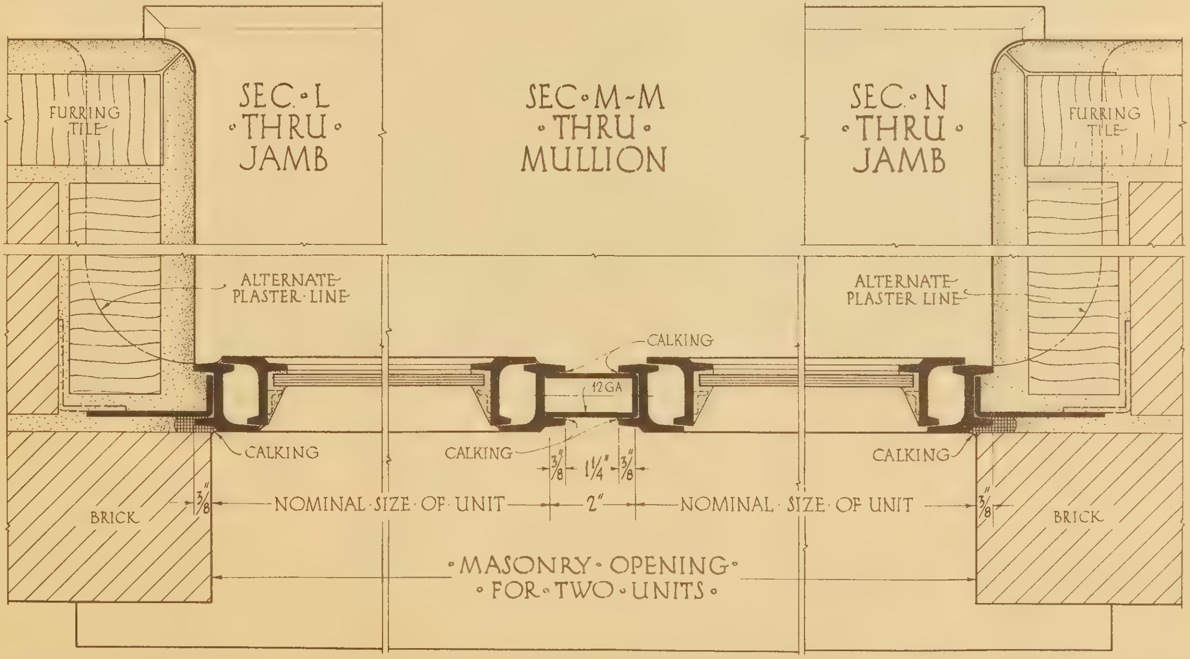

G
ANCHORS
H
J
L
H
M
M
N
K
ANCHORS
125°
125°
ELEVATION VENTILATORS · CLOSED ·
SECTION VENTILATORS · OPEN ·

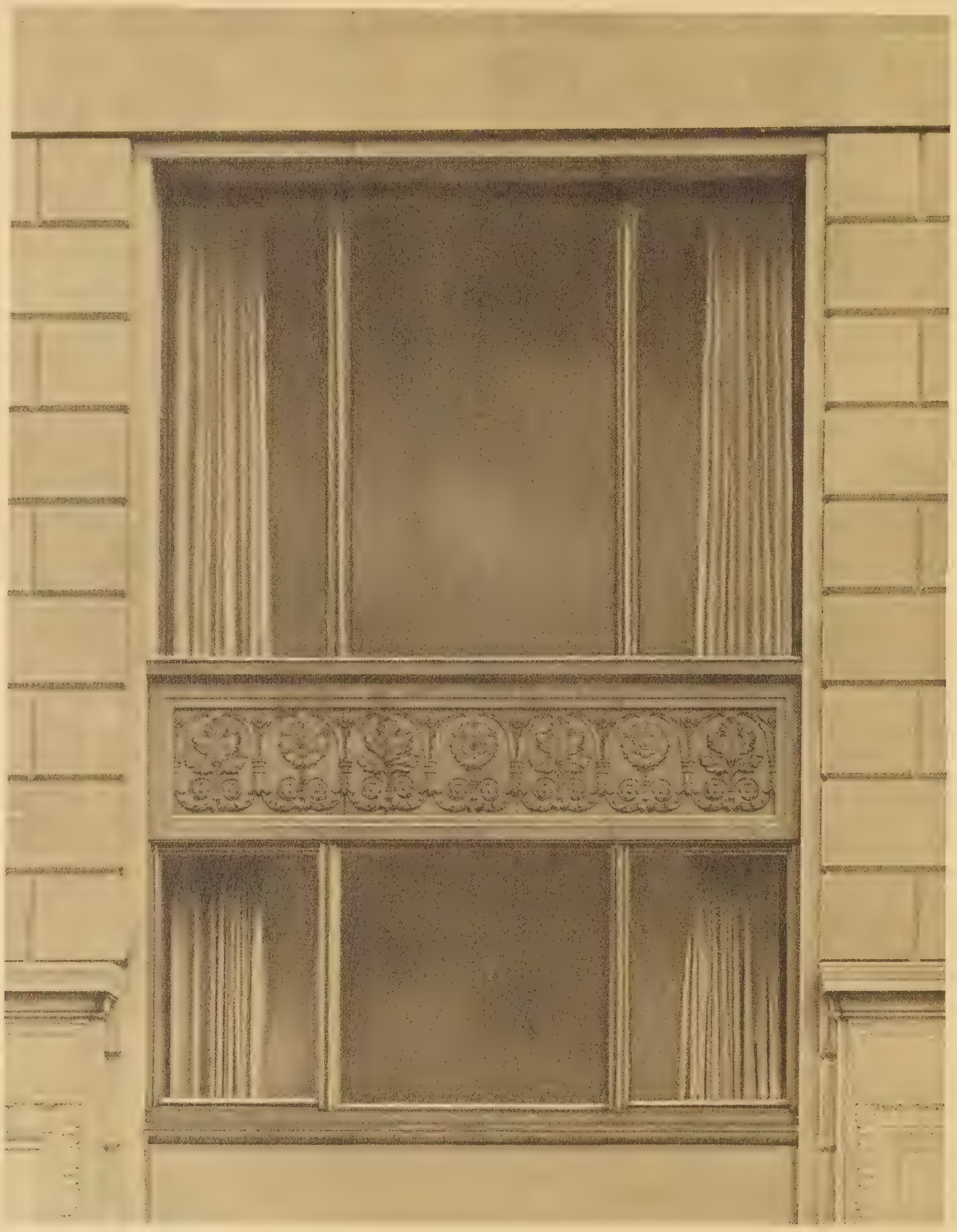
SCALE 1/8″ = 1′-0″




G
ANCHOR
H
L
B
N
K
ANCHOR
125°
125°
ELEVATION VENTILATORS · CLOSED ·
SECTION VENTILATORS · OPEN ·

· SEC · B · THRU · MEETING · RAIL





AN OPENING FILLED WITH LUPTON SINGLE CASEMENTS CAN BE MADE UNUSUALLY ATTRACTIVE AND ALLOWS FOR DISTINCT VARIETY IN WINDOW ARRANGEMENT.

LUPTON SINGLE CASEMENTS

Details of these windows are the same as in the Lupton Combination Casements and have the same structural and 100% ventilation advantages. They offer an almost limitless number of arrangements and opening sizes when used in any of the many combinations of which they are capable, both in the horizontal and vertical positions. Details of these casements used singly and in combination are shown on pages 17 and 18 respectively.

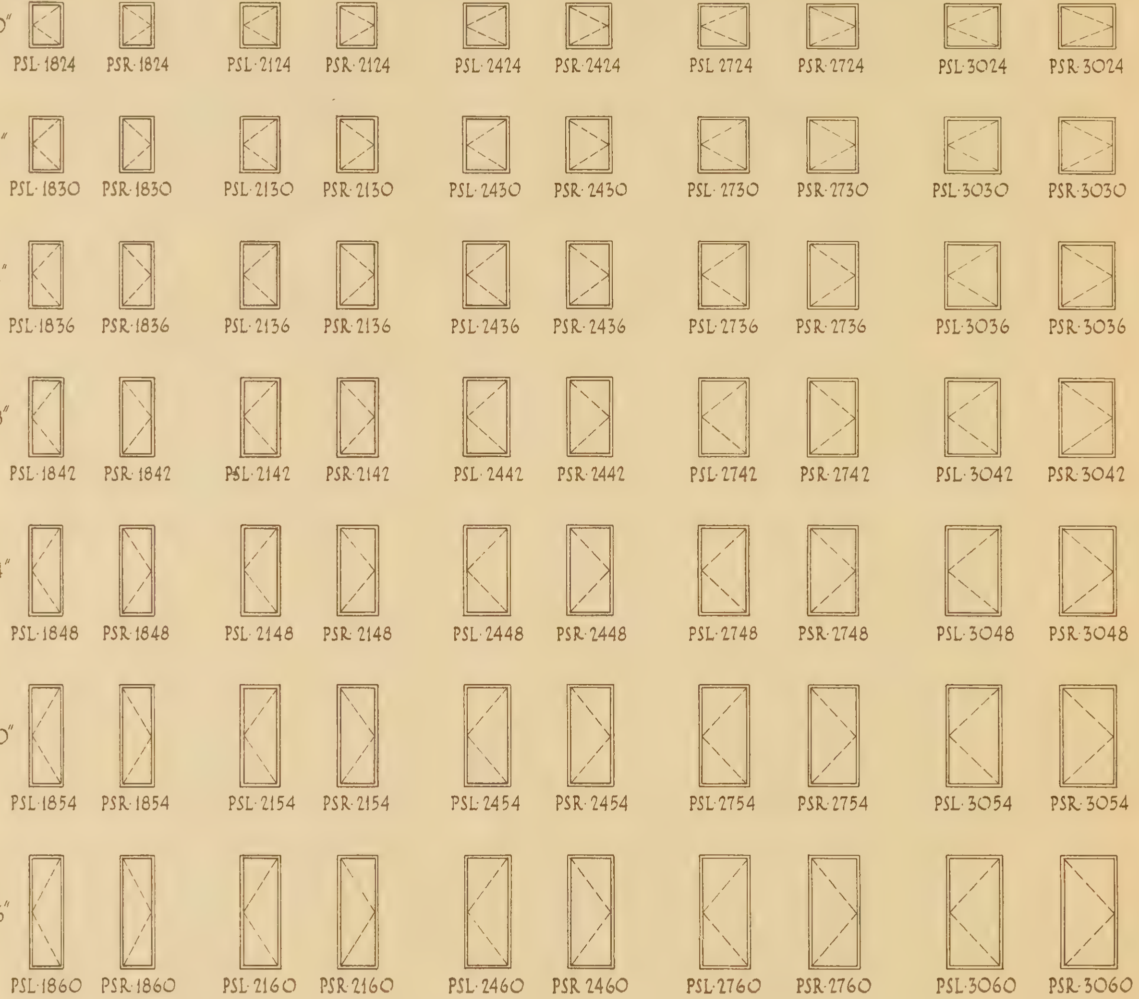
The details on page 18 and the diagrams on page 19 suggest possibilities in the way of composite windows. The tables on page 19 give the possible masonry openings to be obtained with the two arrangements illustrated.

These windows can be used in conjunction with the four standard types in fifty sizes, thereby avoiding the use of special units. Bronze hardware as illustrated on page 24 is furnished. Friction shoe holds ventilators at any reasonable degree of opening and eliminates all sill hardware. Glazing angles for outside use furnished at extra cost. See specifications on page 23.

SINGLE · PROJECTED · CASEMENTS

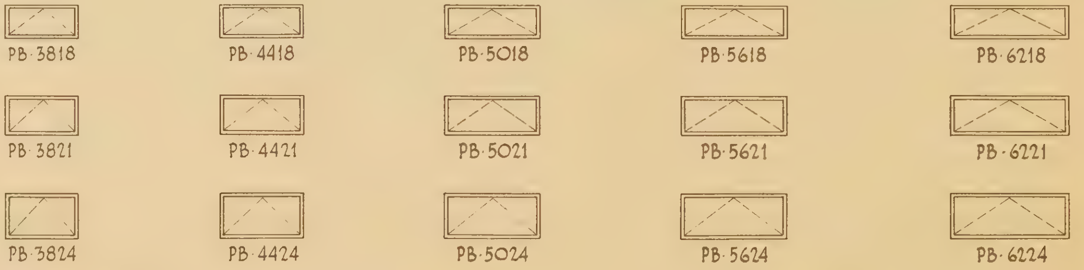
STANDARD · TYPES · AND · SIZES

SIDE · PROJECTED · OUT



NOMINAL SIZE *	GLASS SIZE	1'-6" 15¼"		1'-9" 18¼"		2'-0" 21¼"		2'-3" 24¼"		2'-6" 27¼"	
2'-0"	20"	PSL·1824	PSR·1824	PSL·2124	PSR·2124	PSL·2424	PSR·2424	PSL·2724	PSR·2724	PSL·3024	PSR·3024
2'-6"	26"	PSL·1830	PSR·1830	PSL·2130	PSR·2130	PSL·2430	PSR·2430	PSL·2730	PSR·2730	PSL·3030	PSR·3030
3'-0"	32"	PSL·1836	PSR·1836	PSL·2136	PSR·2136	PSL·2436	PSR·2436	PSL·2736	PSR·2736	PSL·3036	PSR·3036
3'-6"	38"	PSL·1842	PSR·1842	PSL·2142	PSR·2142	PSL·2442	PSR·2442	PSL·2742	PSR·2742	PSL·3042	PSR·3042
4'-0"	44"	PSL·1848	PSR·1848	PSL·2148	PSR·2148	PSL·2448	PSR·2448	PSL·2748	PSR·2748	PSL·3048	PSR·3048
4'-6"	50"	PSL·1854	PSR·1854	PSL·2154	PSR·2154	PSL·2454	PSR·2454	PSL·2754	PSR·2754	PSL·3054	PSR·3054
5'-0"	56"	PSL·1860	PSR·1860	PSL·2160	PSR·2160	PSL·2460	PSR·2460	PSL·2760	PSR·2760	PSL·3060	PSR·3060

BOTTOM · PROJECTED · OUT



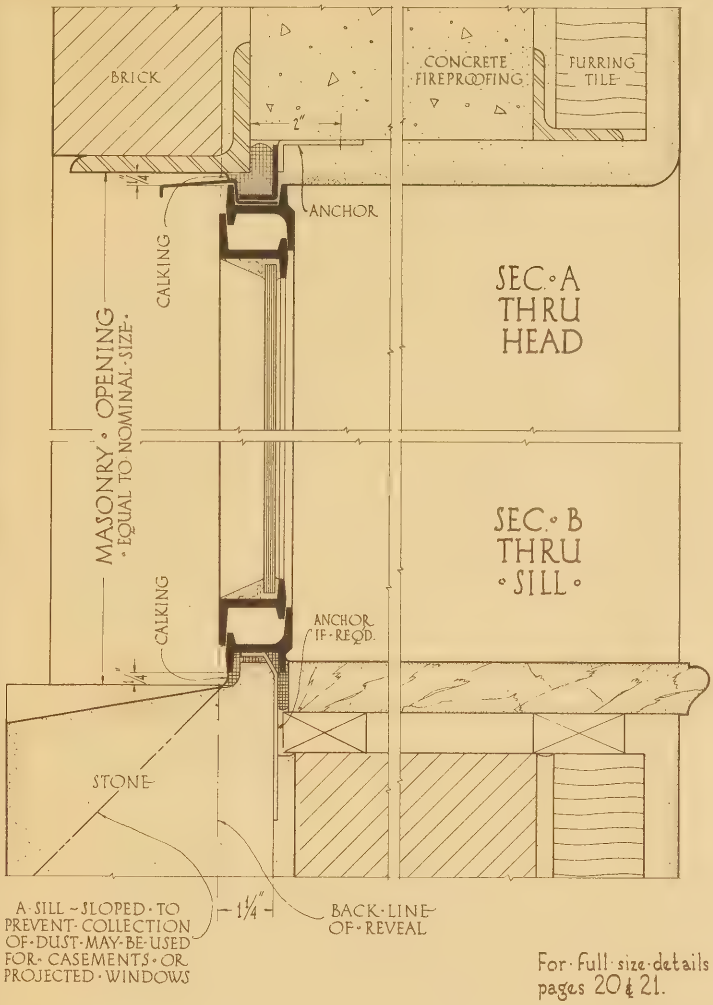
NOMINAL SIZE *	GLASS SIZE	3'-2" 35¼"	3'-8" 41¼"	4'-2" 47¼"	4'-8" 53¼"	5'-2" 59¼"
1'-6"	14"	PB·3818	PB·4418	PB·5018	PB·5618	PB·6218
1'-9"	17"	PB·3821	PB·4421	PB·5021	PB·5621	PB·6221
2'-0"	20"	PB·3824	PB·4424	PB·5024	PB·5624	PB·6224

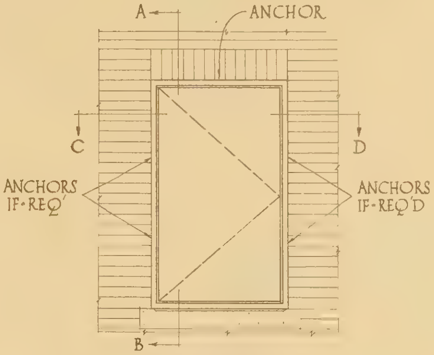
* Nominal Size equals the Masonry Opening required for one unit.

Note:- All units are viewed from the inside.

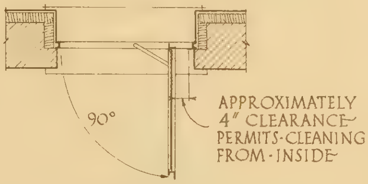
SINGLE PROJECTED • CASEMENTS OUT • AT • SIDE

SCALE • FOR • DETAILS ~ 3" = 1'-0"





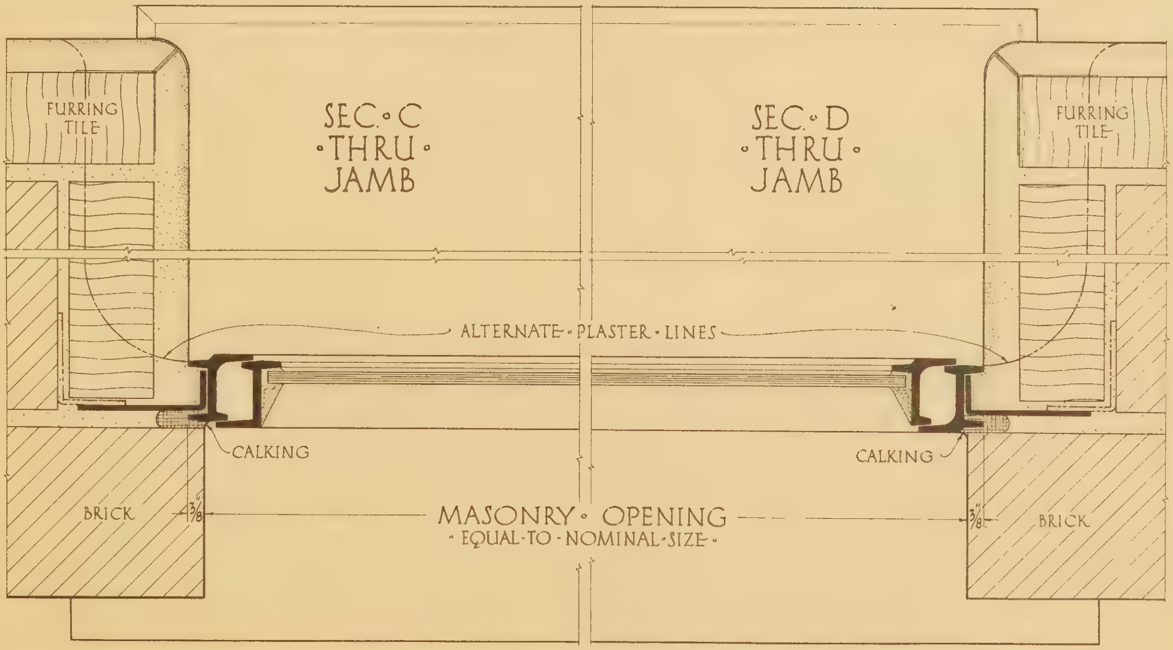
• ELEVATION •
VENTILATOR • CLOSED



• PLAN •
VENTILATOR • OPEN

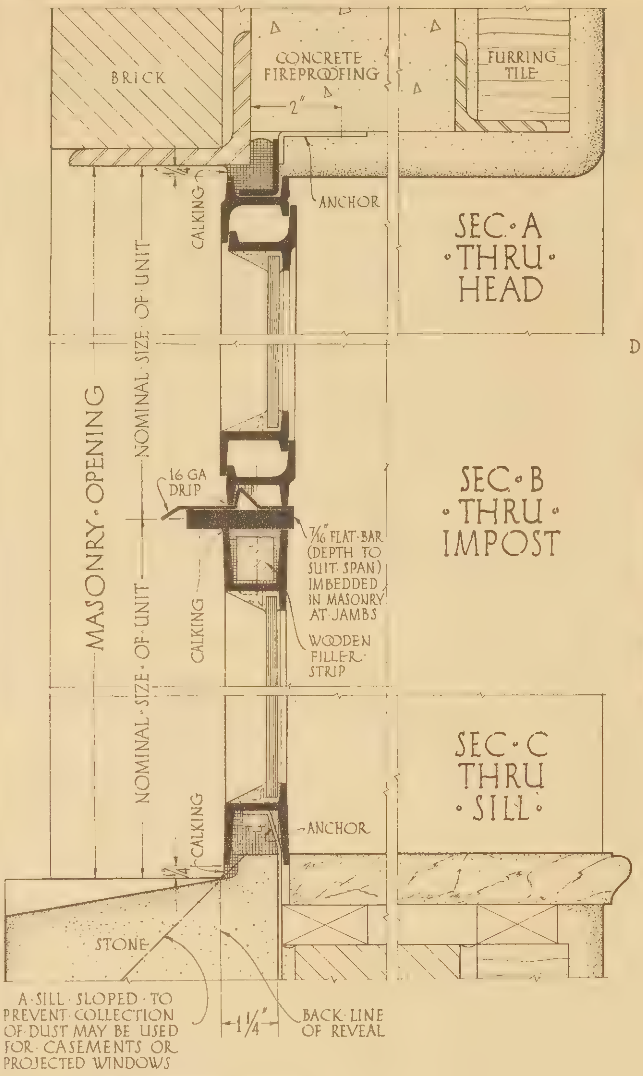
SCALE ~ 1/4" = 1'-0"

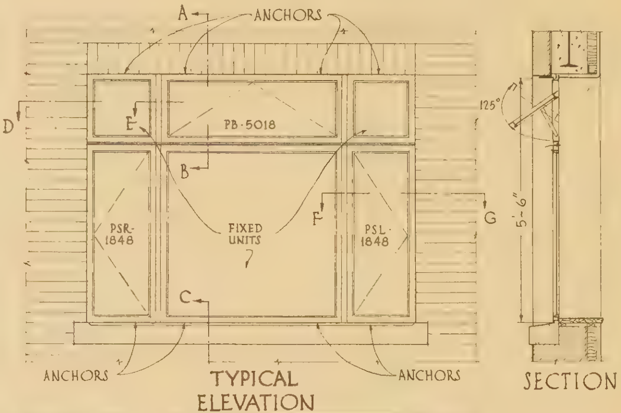
For • full • size • details • see ~ pages 20 & 21.

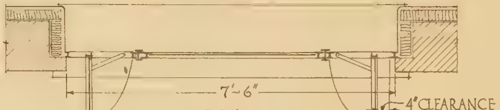


COMPOSITE · WINDOWS
SINGLE · PROJECTED · CASEMENTS
COMBINED · WITH · FIXED · UNITS

SCALE · FOR · DETAILS ~ 3" = 1'-0"







PLAN

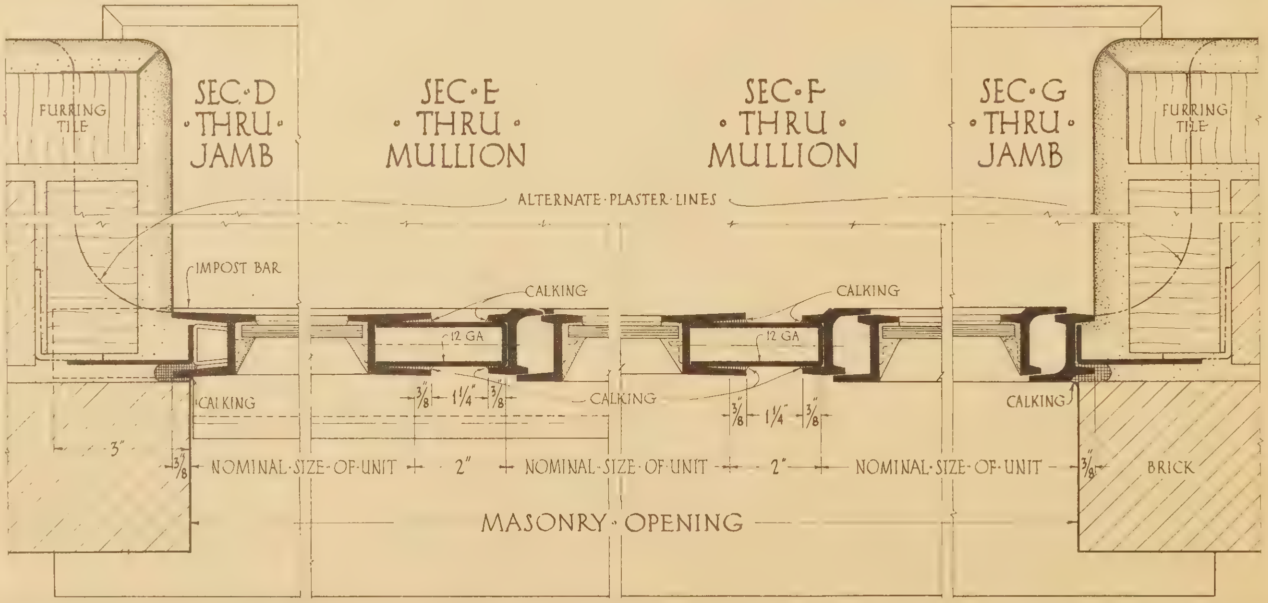
SCALE ~ 1/4" = 1'-0"

· NOTES ·

1 - Several · Single · Projected · Casements · can · be · combined · in · one · opening · by · using · the · impost · and ~ mullion · details · shown · on · this · sheet ~ Fixed · units in · sizes · to · meet · the · requirements · of · the · design · are readily · furnished · altho · not · carried · in · stock.

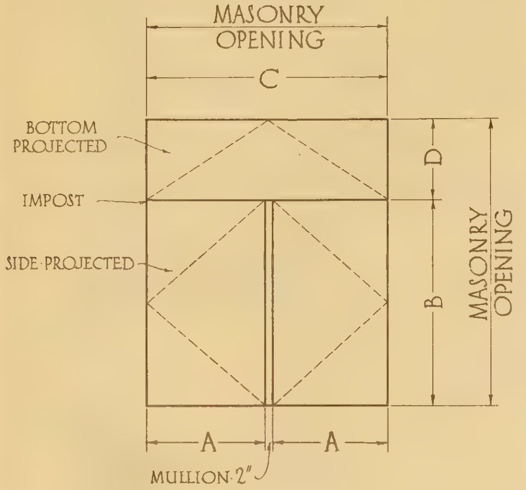
2 - Out · at · bottom · ventilators · open · approximately 125° to · permit · cleaning · from · inside · the · building.

3 - For · full · size · details · see · pages 20 & 21.

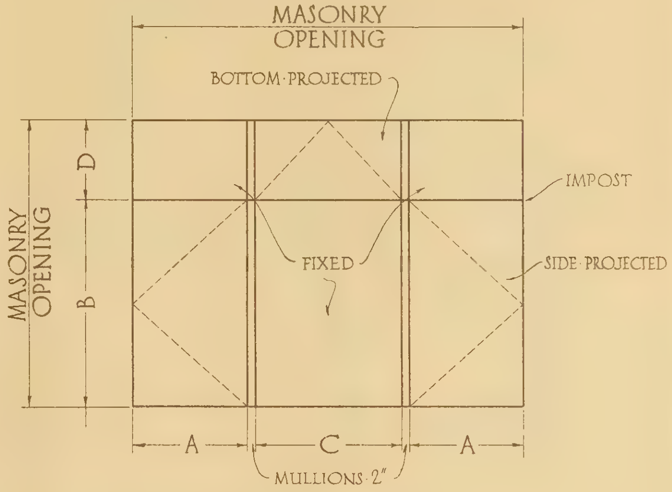


WIDTHS & HEIGHTS OF MASONRY OPENINGS FOR COMPOSITE WINDOWS

TABLES GIVING MASONRY OPENING DIMENSIONS FOR TWO TYPICAL DESIGNS OF COMPOSITE WINDOWS



TYPICAL ELEVATION I



TYPICAL ELEVATION II

HEIGHTS OF MASONRY OPENINGS FOR ELEVATIONS I & II

DIMEN. B	DIMENSION D		
	1'-6"	1'-9"	2'-0"
2'-0"	3'-6"	3'-9"	4'-0"
2'-6"	4'-0"	4'-3"	4'-6"
3'-0"	4'-6"	4'-9"	5'-0"
3'-6"	5'-0"	5'-3"	5'-6"
4'-0"	5'-6"	5'-9"	6'-0"
4'-6"	6'-0"	6'-3"	6'-6"
5'-0"	6'-6"	6'-9"	7'-0"

A = Nominal Width of Side Projected Unit.
B = Nominal Height of Side Projected Unit.
C = Nominal Width of Bottom Projected Unit.
D = Nominal Height of Bottom Projected Unit.

See Page 16 for Units used in Combinations shown on this page.

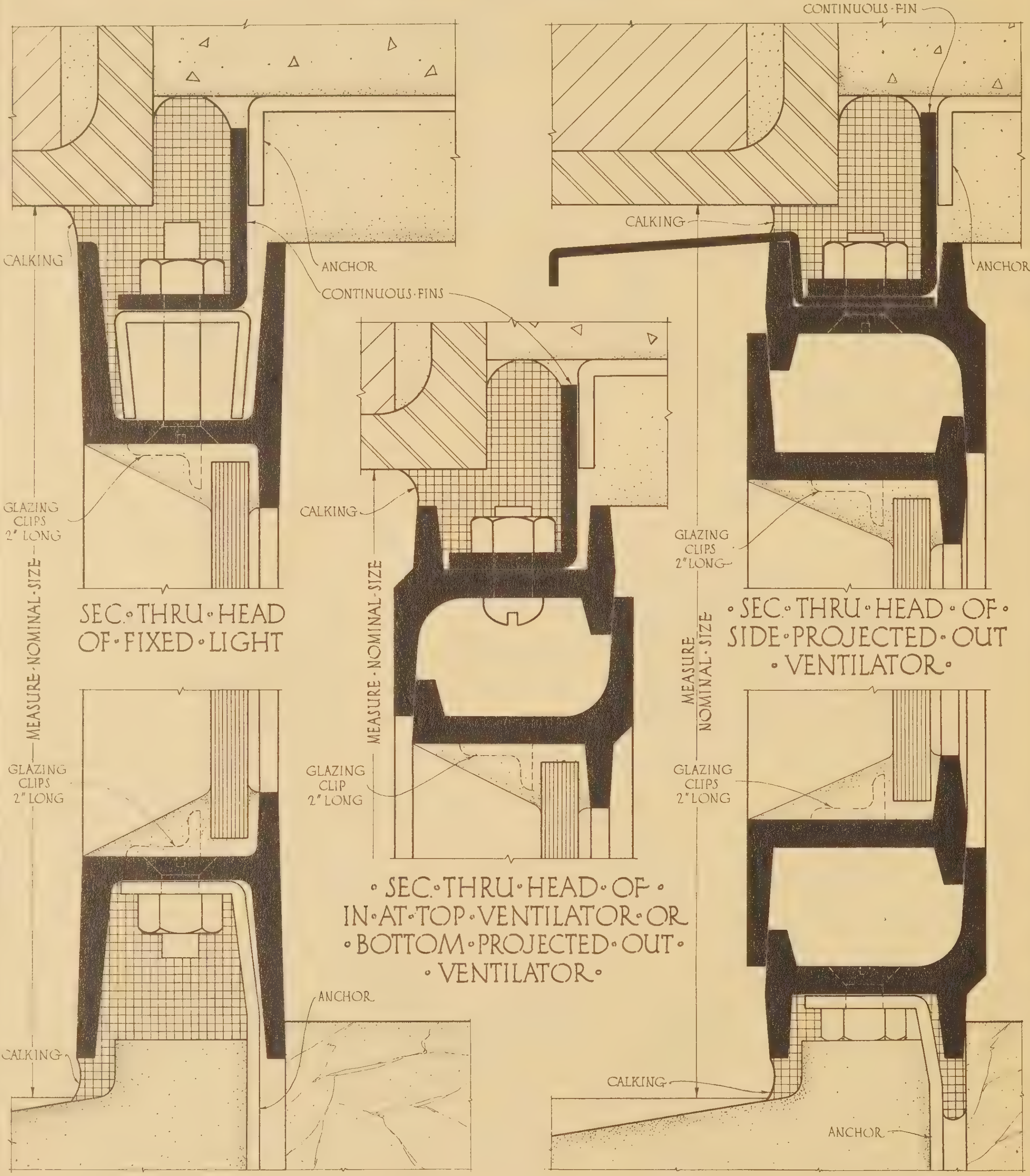
WIDTHS OF MASONRY OPENINGS FOR ELEVATION I

DIMEN. A	DIMEN. C	MASONRY OPENING
1'-6"	3'-2"	3'-2"
1'-9"	3'-8"	3'-8"
2'-0"	4'-2"	4'-2"
2'-3"	4'-8"	4'-8"
2'-6"	5'-2"	5'-2"

WIDTHS OF MASONRY OPENINGS FOR ELEVATION II

DIMEN. A	DIMENSION C				
	3'-2"	3'-8"	4'-2"	4'-8"	5'-2"
1'-6"	6'-6"	7'-0"	7'-6"	8'-0"	8'-6"
1'-9"	7'-0"	7'-6"	8'-0"	8'-6"	9'-0"
2'-0"	7'-6"	8'-0"	8'-6"	9'-0"	9'-6"
2'-3"	8'-0"	8'-6"	9'-0"	9'-6"	10'-0"
2'-6"	8'-6"	9'-0"	9'-6"	10'-0"	10'-6"

PROJECTED·CASEMENTS
·FULL·SIZE·DETAILS·



SEC·THRU·HEAD OF·FIXED·LIGHT

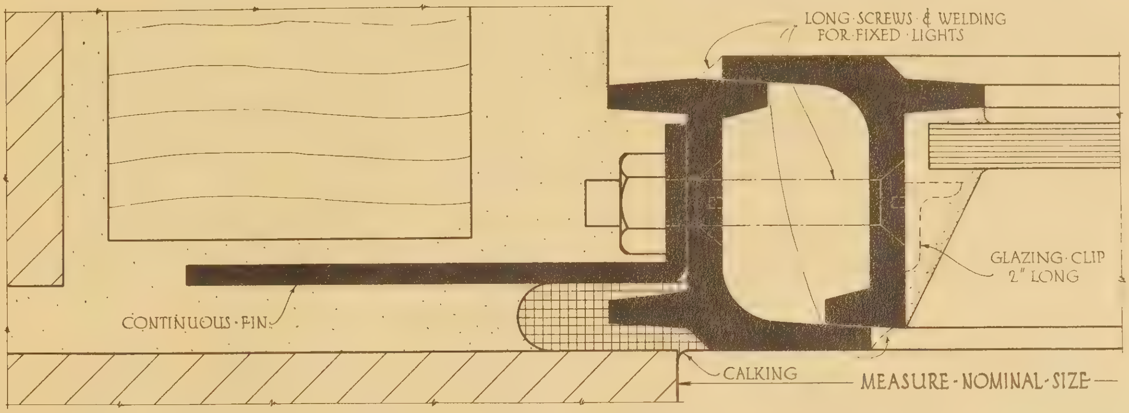
·SEC·THRU·HEAD·OF· SIDE·PROJECTED·OUT ·VENTILATOR·

·SEC·THRU·HEAD·OF· IN·AT·TOP·VENTILATOR·OR ·BOTTOM·PROJECTED·OUT· ·VENTILATOR·

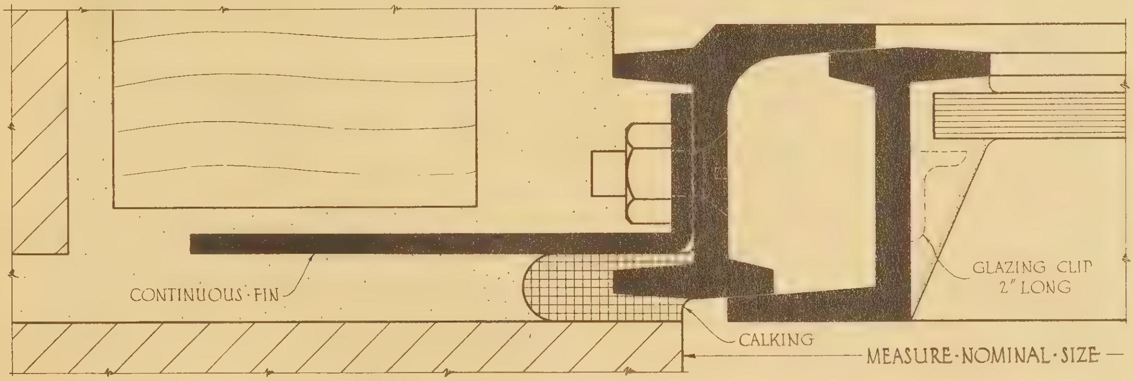
SECTION·THRU·SILL·OF·FIXED·LIGHT ·USED·IN·COMPOSITE·WINDOWS·

SECTION·THRU·SILL·FOR· ALL·TYPES·OF·PROJECTED·VENTILATORS

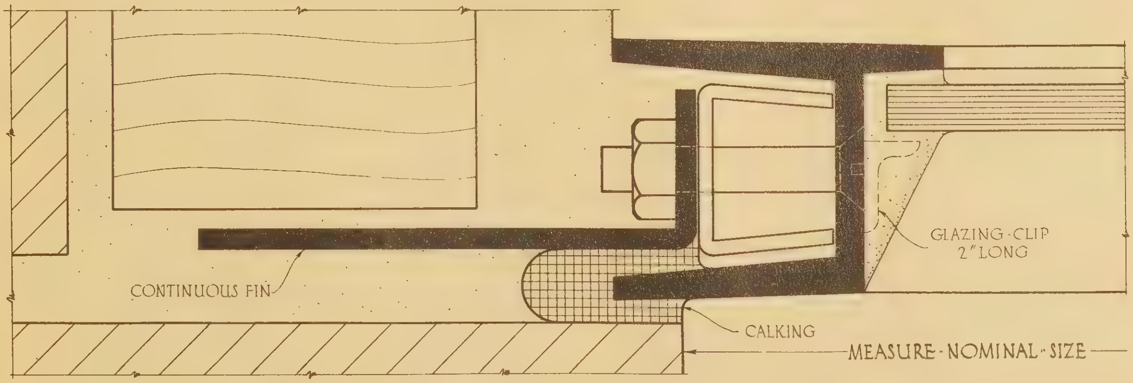
PROJECTED • CASEMENTS • FULL • SIZE • DETAILS •



SEC • THRU • JAMB • OF • IN • AT • TOP • VENTILATOR • SIDE • PROJECTED • OUT • VENTILATOR • OR • FIXED • LIGHT •



SECTION • THRU • JAMB • OF SIDE • PROJECTED • OUT • VENTILATORS • OR BOTTOM • PROJECTED • OUT • VENTILATOR



SECTION • THRU • JAMB • OF • FIXED • LIGHT USED • IN • COMPOSITE • WINDOWS.

SPECIFICATIONS
PROJECTED CASEMENT WINDOWS

WORK INCLUDED

1 Furnish and install where shown on drawings, Lupton Steel Projected Casement Windows, manufactured by David Lupton's Sons Co., Philadelphia.

NOTE: All Projected Casement Windows should be accurately listed and located either in schedules, on plans or in specifications.

SHOP DRAWINGS

2 Submit in triplicate, for the approval of the supervising architect, complete shop and installation drawings. These shall show scaled sections of window and frame members, details of construction, hardware, anchoring, etc.

MATERIALS

3 Ventilator and frame members shall be made of copper-bearing, rust resisting, low carbon steel, specially rolled in solid, one piece sections.

4 Vertical Mullions shall be of 12 ga. plate, formed.

5 Imposts shall be of 7/16" thick, steel plate, with a 16 ga. galvanized weathering member.

6 Glazing Clips shall be 5/16" x 1/2" rolled steel angles, 2" long.

NOTE: See note at end of specification.

CONSTRUCTION

7 All Projected Casement Windows shall be straight and true, members in alignment and surfaces in a plane. All joints shall be welded rigid and tight and so fabricated at the junctures or intersections as to prevent loss of strength.

8 Three sides of the ventilator shall be made of bars weighing not less than 1.7 lbs. per foot and the remaining side, of a bar weighing not less than 1.82 lbs. per foot. Frames shall be made of bars weighing not less than 2.14 lbs. per foot.

9 At the corners and joints of the frames and ventilators the members shall be mitered or notched framed together and heavily welded so as to make a rigid, tight connection.

Exposed, welded surfaces shall be ground smooth. The frame and ventilator shall form a two-point, flat, continuous, weathering contact.

10 Mullions shall be provided and bolts for attachment, when two or more windows are placed side by side.

11 Imposts shall be provided and bolts for attachment, when two or more windows are placed one above the other.

12 At the head of all Side Projected Out Ventilators a 16 ga. formed steel, hot galvanized, weather bar shall be used.

13 Fins of 12 ga. steel for Head and Jambs shall be furnished and attached in factory.

14 Anchor Clips of 14 ga. steel for Head, Jambs and Sill shall be furnished and applied in field.

15 Glazing Clips shall be held in place by steel machine screws.

NOTE: See note at end of specification.

16 Ventilators shall be accurately pivoted on two ventilator arms of solid steel. The two ventilator arms shall be attached to the ventilator and frame members by malleable iron arm blocks with brass pivot pins and washers. Ventilators shall be equipped with two bronze friction shoes, sliding in the outside frame member so as to guide the ventilator and prevent rattling. The friction shoes shall be equipped with a rustproof steel spring and adjusting screw, so designed to assure constant friction and hold the

SPECIFICATIONS (Continued)

ventilator in an open position without the use of fasteners or adjusters.

HARDWARE

17 All Handles and Latches shall be solid bronze with natural bronze finish. All hardware (listed below) shall be fitted in the shop and shipped loose.

Note: The following hardware is standard:

For Side Projected Out Ventilators

Bronze Cam Latch—for Ventilators in windows less than 4′ 6″ in height.

Double Locking Device—for Ventilators in windows 4′ 6″ or more in height.

For Projected In-At-Top Ventilators

Bronze Cam Latch for Ventilators within reach from floor, one handle on windows up to 3′ 6″ wide; two handles on windows over 3′ 6″ wide.

Bronze Ring Type Cam Latch for Ventilators beyond reach from floor.

CALKING CEMENT

18 The window manufacturer shall furnish a sufficient quantity of non-staining, calking cement to make the Head, Sill, Jambs, Mullions and Imposts weather tight. Wooden filler strips shall be used where indicated on drawings.

ERECTION

19 All Projected Casement Windows shall be erected in prepared openings by the window contractor (unless otherwise specified).

20 All Projected Casement Windows shall be set plumb and true, properly aligned and securely anchored before glazing. Mullions and Imposts shall be bolted securely to Frames. The windows shall have the calking cement neatly applied where they come in contact with the building construction.

Note: Include in the masonry specifications that all masonry openings shall be accurately constructed in accordance with the installation details for Projected Casement Windows. Note that when the continuous fins are built in the masonry, the placing of the furring tile at the Jambs must be delayed until after the windows are set. All grouting, pointing, etc., should be done by the mason contractor after the windows are set.

PAINTING

21 All windows shall receive one coat of manufacturers' standard dark gray paint, oven-dried.

Note: The following should be provided for in the paint specification: One additional coat of paint should be applied after erection, before glazing. Further painting should be deferred until at least three weeks after glazing to allow putty to set. One or more additional coats may then be applied, as required. It is advisable to hold the painting contractor responsible for cleaning plaster or other foreign matter from the weathering surfaces of the windows in order that it may not be painted over and cause imperfect contact.

GLASS AND GLAZING

Note: Specify glass and glazing under proper heading elsewhere in specifications.

(a) Do not specify single thickness glass.

(b) Specify high-grade steel casement putty (ordinary wood sash putty must not be used).

(c) Specify that all Steel Projected Casements shall be glazed from the outside; that all glass shall be set in a bed of putty and fastened by Angle Glazing Clips; and that the putty shall be applied in a neat, clean manner.

See note below.

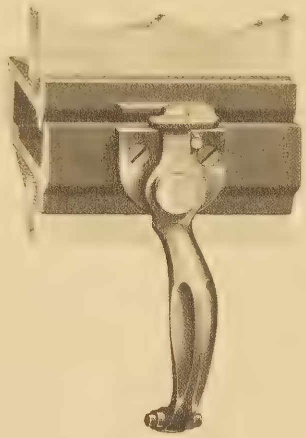
NOTE

When specified, and at an additional cost, continuous Glazing Angles will be furnished and the Glazing Clips omitted.

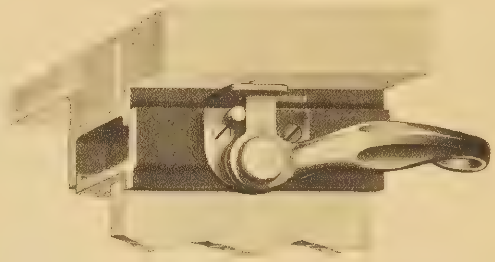
These Glazing Angles are made of hot rolled steel angle section $\frac{7}{16}''$ x $\frac{23}{32}''$ x $\frac{3}{32}''$.

They are cut in standard lengths with mitered ends, shipped loose, and attached by the glazing contractor with the round head udylited steel machine screws supplied for the purpose.

HARDWARE FOR PROJECTED CASEMENTS



ALL LATCHES
ARE SOLID
BRONZE WITH
NATURAL
BRONZE
FINISH



RING TYPE CAM LATCH NO. 330

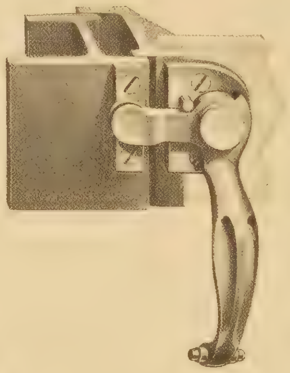
For use with pole hook used at center of Projected-in-at-top Ventilators beyond reach from floor.

Steel Keeper No. 2580 is welded to the frame.

RIGHT HAND CAM LATCH NO. 326

Used on Projected-in-at-top Ventilators within reach from floor. (Left Hand No. 327).

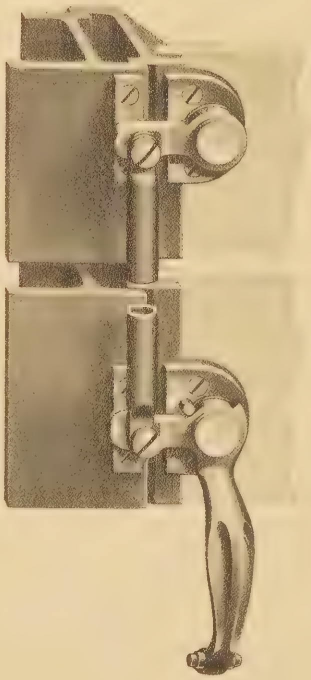
One handle for windows up to 3′ 6″ wide. Two handles for windows over 3′ 6″ wide. Steel Keeper No. 2580 is welded to the frame.



RIGHT HAND CAM LATCH NO. 315

Used on Side Projected Ventilators in windows less than 4′ 6″ in height. (Left Hand No. 316).

Mounted on Steel backing Plate No. 2228 welded to frame of ventilator.

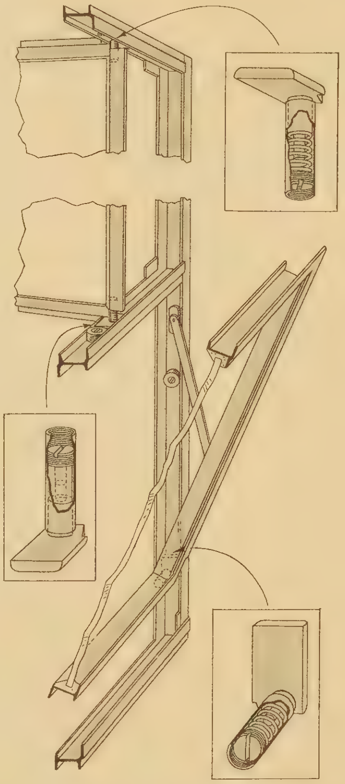


DOUBLE LOCKING DEVICE

(Right Hand) used on Side Projected Ventilators in windows 4′ 6″ or more in height. Consists of:

1. Auxiliary Latch No. 325.
2. ½″ Steel Tube.
3. Right Hand Cam Latch No. 322. (Left hand No. 323).

Both Auxiliary Latch and Cam Handle are mounted on Steel Backing Plates No. 2228 welded to frame of ventilator.



FRICTION SPRING FOR VENTILATORS

Detailed view showing the Lupton Standard Friction Spring for all projected ventilators. See close-up views in rectangles.

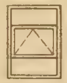
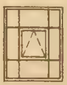
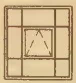
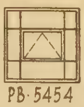
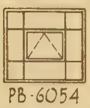
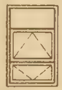
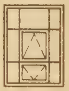
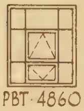
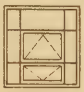
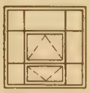
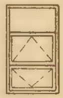
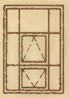
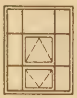
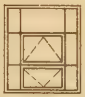
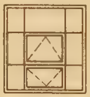
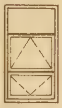
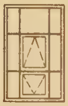
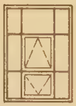
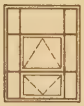
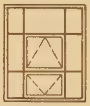
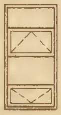
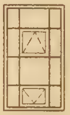
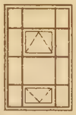
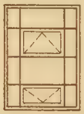
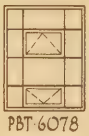
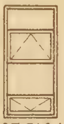
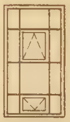
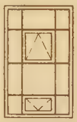
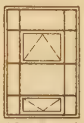
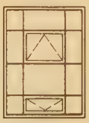
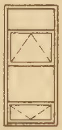
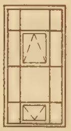
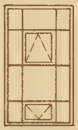
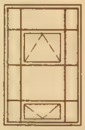
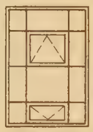
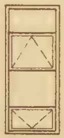
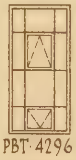
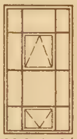
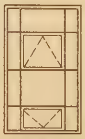
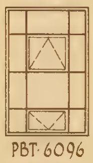
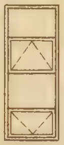
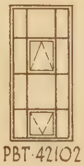
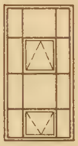
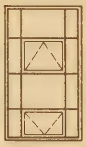
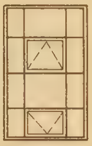
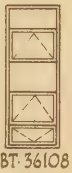
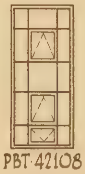
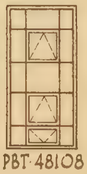
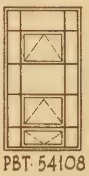
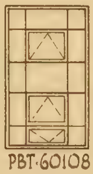
LUPTON ARCHITECTURAL PROJECTED WINDOWS

Some buildings, or parts of buildings, because of limits in cost or because of other restrictions will not permit the use of the windows previously described. In such cases, Lupton Architectural Projected Windows, made of lighter sections, will often fill the requirements of good ventilation and lighting with entire satisfaction.

Bronze hardware with natural finish, as illustrated on page 30, is regularly furnished. Friction shoe holds ventilators at any reasonable degree of opening and eliminates all sill hardware. Windows are outside putty glazed. Details of construction are shown on page 27 and sizes on page 26.

ARCHITECTURAL · PROJECTED · WINDOWS
· OUTSIDE · PUTTY · GLAZED ·

STANDARD · TYPES · & · SIZES

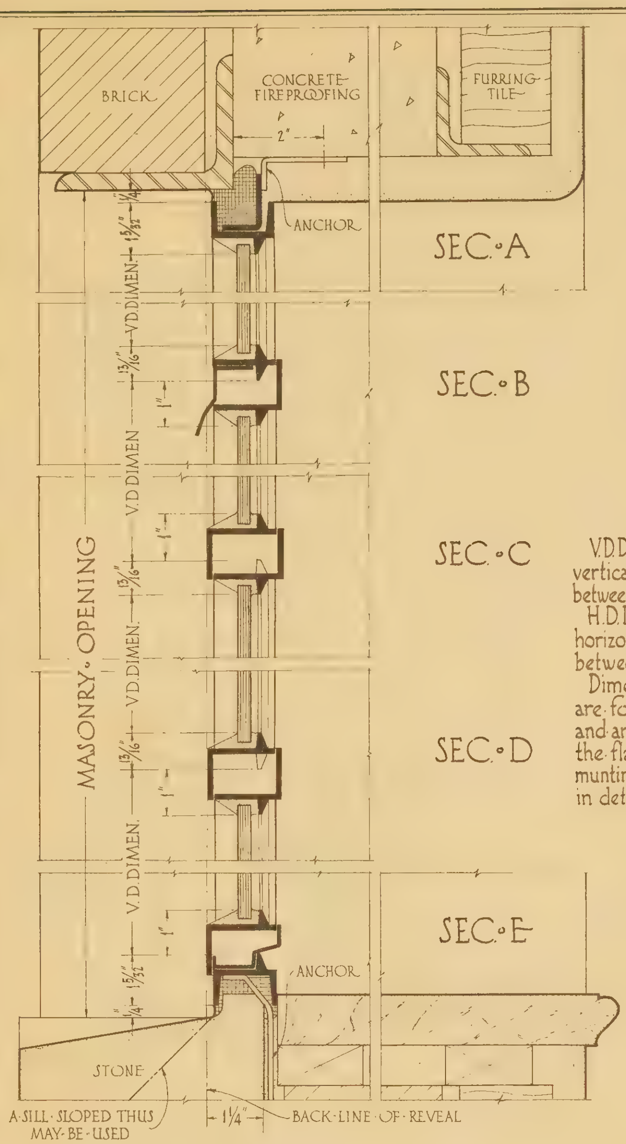
NOMINAL·SIZE *	**GLASS·SIZE	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	V.D.DIMEN. SEE·DETAILS·FOR MEASURE·POINTS.
		33¾"	7½" 24" 7½"	10½" 24" 10½"	8½" 34" 8½"	11½" 34" 11½"	
4' ~ 6"	13⅜" 24" 13⅜"	 PB·3654	 PB·4254	 PB·4854	 PB·5454	 PB·6054	1' ~ 1" 1' ~ 11 9/16" 1' ~ 1"
5' ~ 0"	16⅜" 24" 16⅜"	 PBT 3660	 PBT 4260	 PBT·4860	 PBT·5460	 PBT·6060	1' ~ 4" 1' ~ 11 9/16" 1' ~ 4"
5' ~ 6"	19⅜" 24" 19⅜"	 PBT 3666	 PBT·4266	 PBT·4866	 PBT·5466	 PBT·6066	1' ~ 7" 1' ~ 11 9/16" 1' ~ 7
6' ~ 0"	20⅞" 27" 20⅞"	 PBT·3672	 PBT·4272	 PBT·4872	 PBT·5472	 PBT·6072	1' ~ 8½" 2' ~ 2 9/16" 1' ~ 8½"
6' ~ 6"	16⅜" 21" 20⅝" 16⅜"	 PBT·3678	 PBT·4278	 PBT·4878	 PBT 5478	 PBT·6078	1' ~ 4" 1' ~ 8 9/16" 1' ~ 8 3/16" 1' ~ 4"
7' ~ 0"	16⅜" 24" 23⅝" 16⅜"	 PBT·3684	 PBT 4284	 PBT· 4884	 PBT 5484	 PBT·6084	1' ~ 4" 1' ~ 11 9/16" 1' ~ 11 3/16" 1' ~ 4"
7' ~ 6"	16⅜" 27" 26⅝" 16⅜"	 PBT 3690	 PBT 4290	 PBT 4890	 PBT·5490	 PBT 6090	1' ~ 4" 2' ~ 2 9/16" 2' ~ 2 3/16" 1' ~ 4"
8' ~ 0"	19⅜" 27" 26⅝" 19⅜"	 PBT 3696	 PBT·4296	 PBT·4896	 PBT· 5496	 PBT·6096	1' ~ 7" 2' ~ 2 9/16" 2' ~ 2 3/16" 1' ~ 7"
8' ~ 6"	22⅜" 27" 26⅝" 22⅜"	 PBT·36102	 PBT·42102	 PBT·48102	 PBT·54102	 PBT·60102	1' ~ 10" 2' ~ 2 9/16" 2' ~ 2 3/16" 1' ~ 10"
9' ~ 0"	16⅜" 24" 23¼" 24" 16⅜"	 PBT·36108	 PBT·42108	 PBT·48108	 PBT·54108	 PBT·60108	1' ~ 4" 1' ~ 11 9/16" 1' ~ 10 13/16" 1' ~ 11 9/16" 1' ~ 4"
H.D.DIMEN. SEE·DETAILS·FOR MEASURE·POINTS		2'-9 5/16"	7 1/16", 1'-11 9/16", 7 1/16"	10 1/16", 1'-11 9/16", 10 1/16"	8 1/16", 2'-9 9/16", 8 1/16"	11 1/16", 2'-9 9/16", 11 1/16"	

* Nominal·Size·equals·Masonry·Opening·required·for·one·unit.

** Glass·Sizes·are·for·Fixed·Lights.~ Glass·in·Ventilators·is·2" smaller·in·width·and·height.

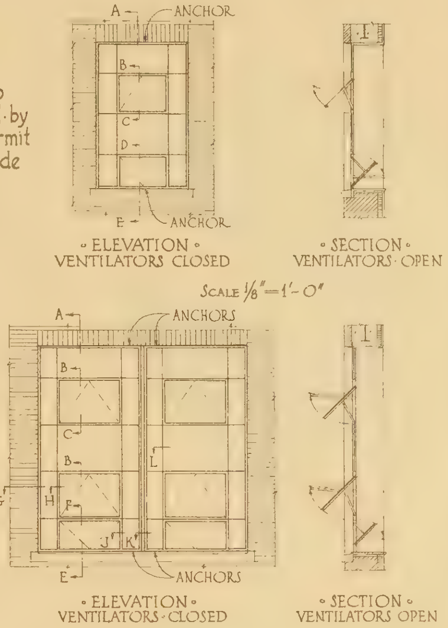
ARCHITECTURAL · PROJECTED · WINDOWS · OUTSIDE · PUTTY · GLAZED

SCALE · FOR · DETAILS ~ 3″ = 1′-0″



· NOTE ·
Ventilators · open · to positions · indicated · by dotted · lines · to · permit cleaning · from · inside the · building.

V.D. Dimens. are the vertical · distances – between · sight · lines. H.D. Dimens. are the horizontal · Distances · between · sight · lines. Dimensions · given are · for · fixed · lights and are measured · to the · flanges · of · the muntin · bars · as · shown in details.

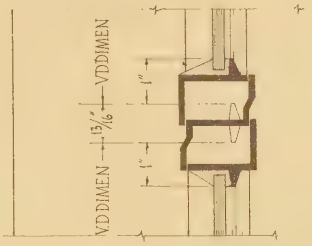


· ELEVATION · VENTILATORS CLOSED

· SECTION · VENTILATORS · OPEN

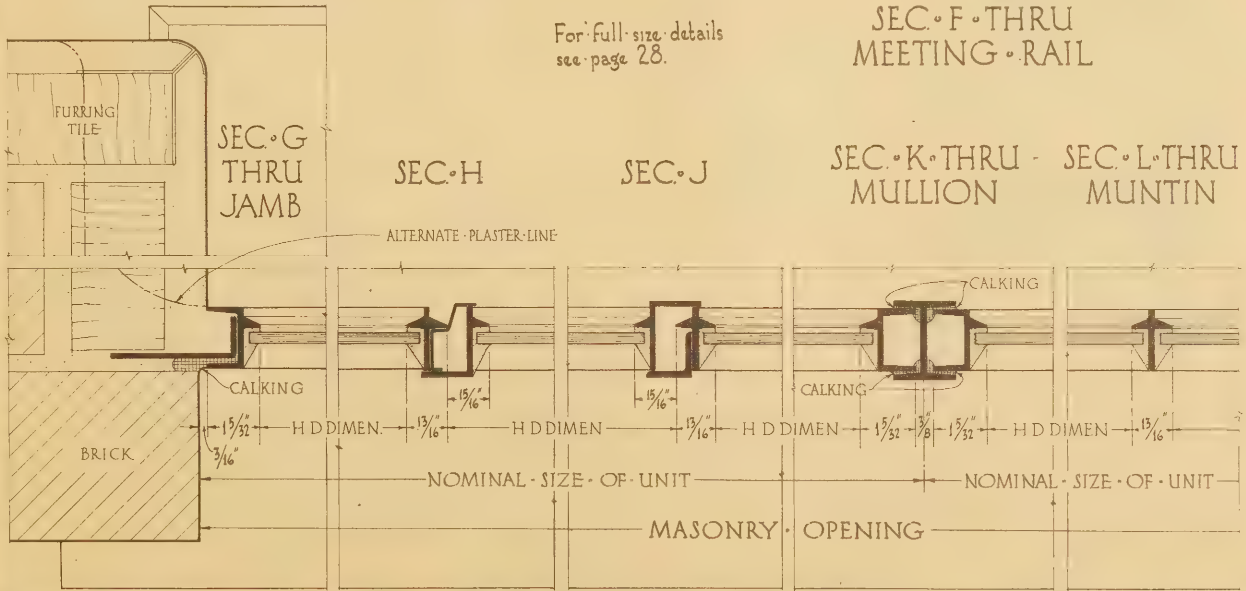
· ELEVATION · VENTILATORS · CLOSED

· SECTION · VENTILATORS OPEN

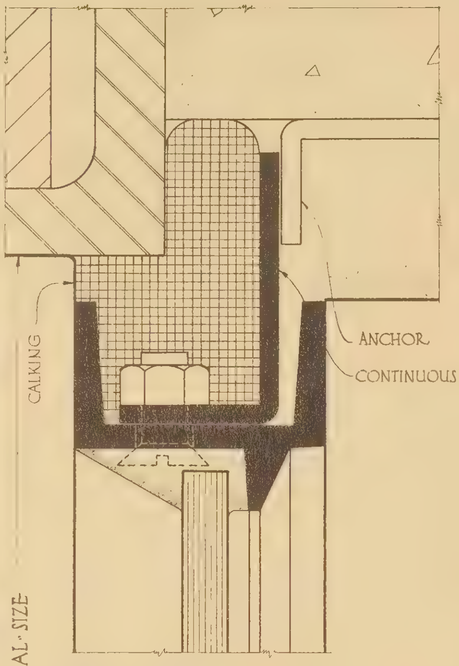


SEC · F · THRU MEETING · RAIL

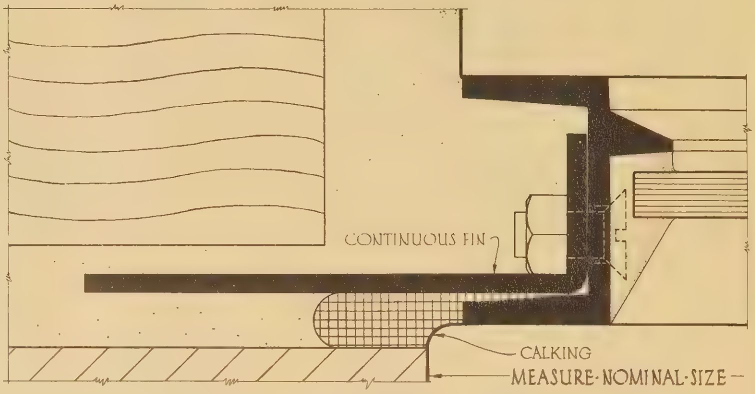
For full size details see page 28.



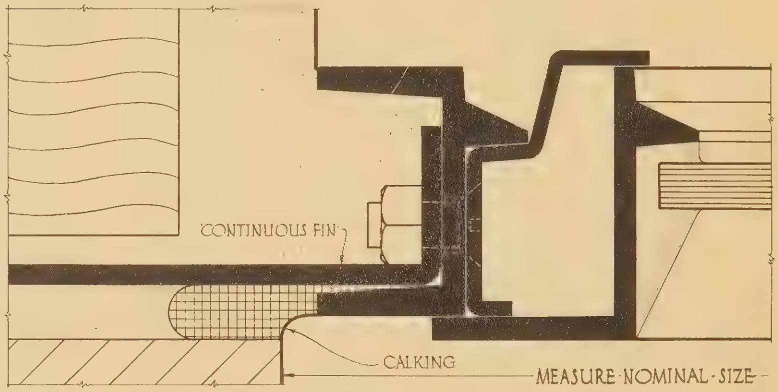
ARCHITECTURAL · PROJECTED · WINDOWS
· OUTSIDE · PUTTY · GLAZED ·
· FULL · SIZE · SECTIONS ·



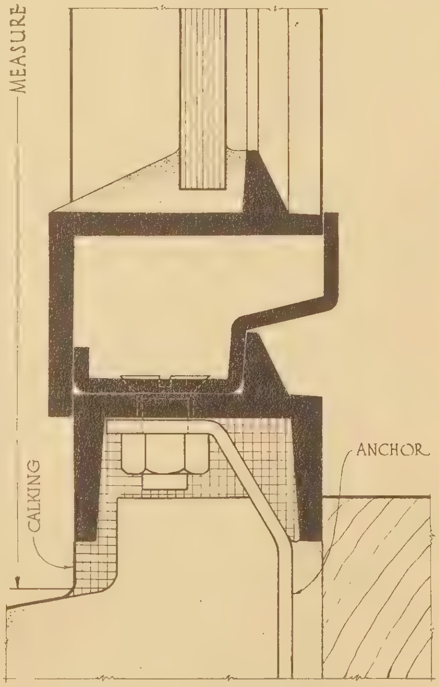
SEC · THRU · HEAD



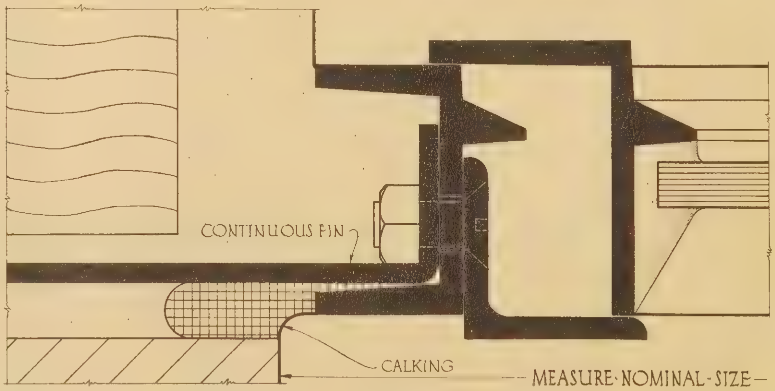
SECTION · THRU · JAMB OF · FIXED · LIGHT



SECTION · THRU · JAMB · OF BOTTOM · PROJECTED · OUT · VENTILATOR



SECTION · THRU · SILL · OF IN · AT · TOP · VENTILATOR



SECTION · THRU · JAMB OF · IN · AT · TOP · VENTILATOR

SPECIFICATIONS
ARCHITECTURAL PROJECTED WINDOWS
(OUTSIDE GLAZED)

WORK INCLUDED

1 Furnish and install where shown on drawings, Lupton Steel Architectural Projected Windows (outside putty glazed), manufactured by David Lupton's Sons Co., Philadelphia, Pa.

Note: All Architectural Projected Windows should be accurately listed and located either in schedules, on plans or in specifications. If more than one type of window be desired, each type should be separately listed and located, or otherwise clearly designated. These details assure greater accuracy in estimates.

SHOP DRAWINGS

2 Submit in triplicate, for the approval of the supervising architect, complete shop and installation drawings. These shall show scaled sections of window and frame members, details of construction, hardware, anchoring, etc.

MATERIALS

3 All members shall be specially designed of low carbon steel.

4 Frame members shall be heavy, solid steel channel section.

5 Muntins shall be special cruciform sections 1⅜″ deep.

6 Vertical Mullions shall be low carbon steel H section.

Note: Structural steel members forming Imposts are not furnished by the window manufacturer.

CONSTRUCTION

7 Both Frames and Ventilators shall be assembled by tenoned, riveted and welded joints at the corners. Continuous, two-point, flat contact weathering shall be provided between ventilators and frames.

8 Muntin Bars shall be attached to Frame members by tenoned, riveted joints and shall be so interlocked at their intersections that the strength and rigidity at the intersection is increased.

9 Vertical Mullions shall be provided, and bolts for attachment when two or more windows are placed side by side.

10 Fins of 12 ga. steel for Head and Jamb shall be furnished and attached in factory.

11 Anchor Clips of 14 ga. steel for Jamb, Sill and Head shall be furnished and applied in field.

12 Each Ventilator shall be accurately pivoted on two Ventilator Arms of solid steel. The connections between the Ventilator Arms and the Window Frames shall be made by steel arm blocks.

13 Each Ventilator shall be equipped with two brass friction shoes, sliding vertically in the Ventilator Jambs to guide the Ventilator and prevent rattling. Each shoe shall be equipped with a rust-proofed, flat steel spring attached to the Ventilator to insure constant pressure at the Jambs.

14 Universal Clip shall be an angle clip $1\frac{15}{16}''$ x 1″ riveted to the Ventilator Frame to provide for attaching Cam Handle.

HARDWARE

15 All Handles and Latches shall be bronze with natural finish.

16 All bronze hardware (listed below) shall be shipped loose, carefully packed to prevent damage until applied for use.

Note: The following hardware is standard:

For Bottom Projected Out Ventilators

Bronze Cam Handle—when handle is within reach from floor. One handle on windows up to 3′ 6″ wide. Two handles on windows over 3′ 6″ wide.

Bronze Ring Type Cam Handle and Bronze Pull Down Ring—when handle is beyond reach from floor.

For Projected In-At-Top Ventilators

Bronze Cam Handle. One handle on windows up to 3′ 6″ wide. Two handles on windows over 3′ 6″ wide.

SPECIFICATIONS (Continued)

CALKING CEMENT

17 The window manufacturer shall furnish a sufficient quantity of non-staining, calking cement to make Head, Sill, Jambs and Mullions weather tight.

ERECTION

18 All Architectural Projected Windows (outside glazed) shall be erected in prepared openings by the window contractor unless otherwise specified.

19 All Architectural Projected Windows (outside glazed) shall be set plumb and true, properly aligned and securely anchored before glazing. Mullions shall be bolted securely to Frames. The windows shall have the calking cement neatly applied where they come in contact with the building construction.

Note: Include in the masonry specification that all masonry openings shall be accurately constructed in accordance with the installation details for Architectural Projected Windows (outside glazed). Note that when the continuous fins are built in the masonry, the placing of the furring tile at the Jambs must be delayed until after the windows are set. All grouting, pointing, etc., should be done by the mason contractor after the windows are set.

PAINTING

20 All windows shall receive one shop coat of window manufacturer's standard dark gray paint, oven-dried.

Note: The following should be provided for in the paint specification:

One additional coat of paint should be applied after erection, before glazing. Further painting should be deferred until at least three weeks after glazing to allow putty to set. One or more additional coats may then be applied as required. It is advisable to hold the painting contractor responsible for cleaning plaster or other foreign matter from the weathering surfaces of the windows in order that it may not be painted over and cause imperfect contact.

GLASS AND GLAZING

Note: Specify glass and glazing under proper heading elsewhere in specifications.

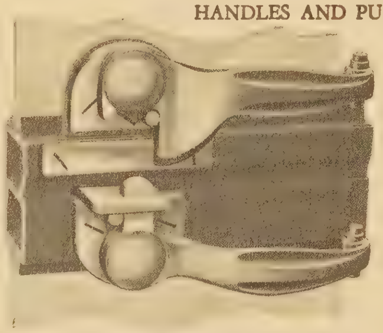
(a) Do not specify single thickness glass.

(b) Specify a high-grade steel window putty (ordinary wood sash putty must not be used).

(c) Specify that Lupton Architectural Projected Windows (outside, putty glazed) shall be glazed from the outside; that the glass shall be set in a bed of putty and held in place by Lupton standard glazing wedges; and that the putty shall be applied in a neat, clean manner.

HARDWARE FOR ARCHITECTURAL PROJECTED WINDOWS

HANDLES AND PULL-DOWN RING ARE BRONZE WITH NATURAL FINISH

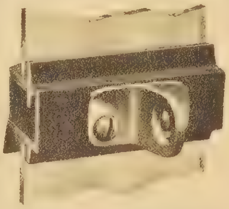


RIGHT HAND CAM HANDLE
No. 268 (at top)

Used on Bottom-projected-out ventilator within reach from floor. (Left Hand 269).

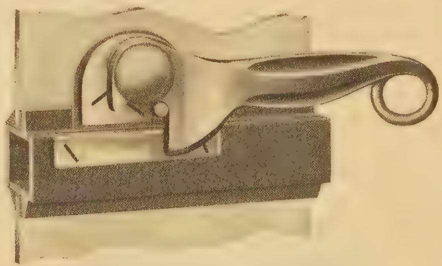
Mounted on Universal Clip riveted to frame of ventilator. One handle for windows up to 3′ 6″ wide. Two handles for windows over 3′ 6″ wide.

Lower handle is No. 266 shown in combination with No. 268 and illustrates its application at meeting rail condition.



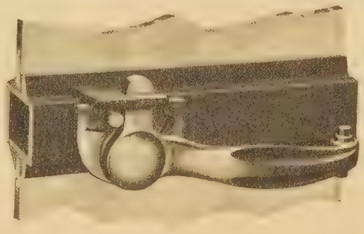
PULL-DOWN RING
No. 251

Used on Bottom-projected-out ventilators. For pole operation.



RING TYPE CAM HANDLE
No. 328

For pole operation, used at center of Bottom-projected-out ventilators beyond reach from floor. Mounted on Universal Clip riveted to frame of ventilator.



RIGHT HAND CAM HANDLE
No. 266

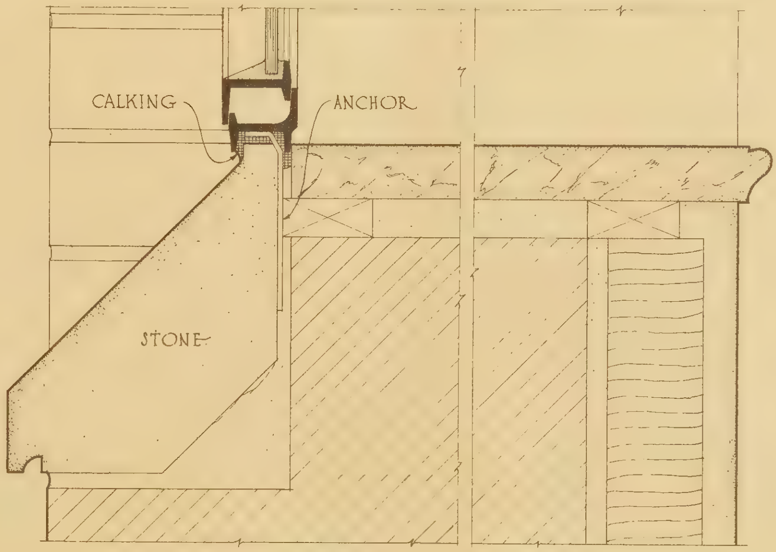
Used on Projected in-at-top ventilators. (Left Hand No. 267).

One handle for windows up to 3′ 6″ wide. Two handles for windows over 3′ 6″ wide. Steel keeper welded to frame.

SUGGESTED SILL DESIGN TO EXCLUDE DUST

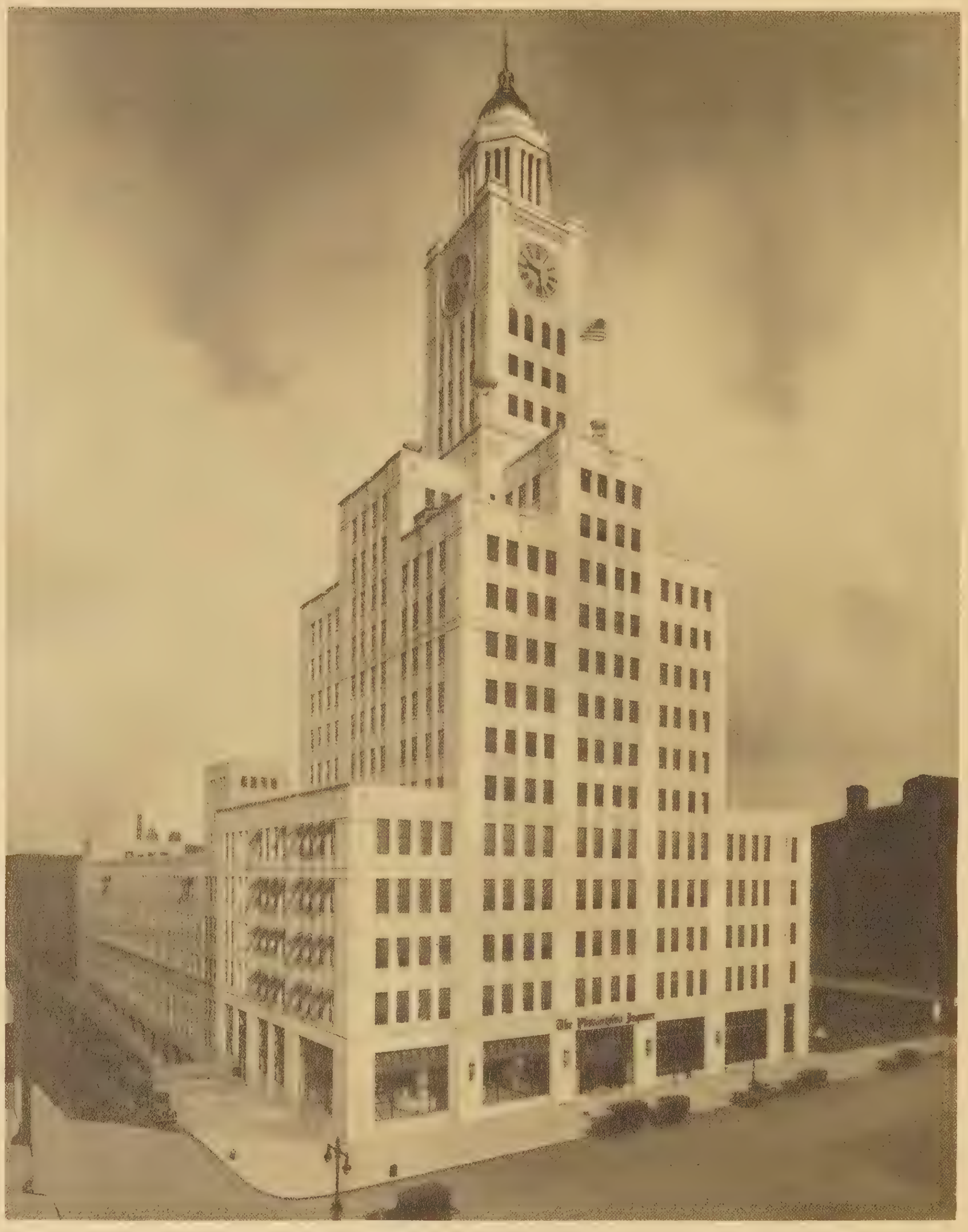
Most of the dust and dirt which blows indoors through open windows has first collected on the outer sills. The use of a 45° sloping sill in connection with the casement windows shown in this book will materially reduce the entrance of this dust. With Lupton Casement Windows, this desirable type of sill can be satisfactorily used since these windows are normally painted, glazed and cleaned from within. Also, the design of the ventilators is such that they further help to prevent the entrance of the small amount of dust that could collect on a 45° sloping sill.

Cleaner interiors are therefore achieved by the combined use of Lupton Projected Casement Windows and a 45° sloping sill. A suggested detail is shown on this page.



SECTION-THRU-SLOPING-SILL

Scale – 3" = 1' – 0"



ELVERSON BUILDING, HOME OF THE PHILADELPHIA INQUIRER, PHILADELPHIA. RANKIN, KELLOGG AND CRANE, ARCHITECTS; ROYDHOUSE-AREY CO., CONTRACTORS. LUPTON DOUBLE HUNG WINDOWS USED IN ALL THE OPENINGS IN THE FRONT ELEVATION. LUPTON ARCHITECTURAL PROJECTED WINDOWS WERE USED IN THE SIDE ELEVATIONS.

LUPTON DOUBLE HUNG WINDOWS

These windows are so designed as to permit the sash to slide up and down easily and at the same time to prevent excessive air infiltration. The frames and sash are made of zinc-coated steel plate. They are furnished with or without muntins. Standard practice includes weather-stripping at jambs but we furnish, at extra cost, additional weather-stripping at head, sill and meeting-rail when it is so specified.

There are two types, E and F, each in fifty sizes. Details of the standard type E window are shown on page 36. Windows of this same design furnished with heavier gauge steel used for all frame members, are known as type F. These details are shown on page 37. On that page also we show the extras which may be purchased for both types as may be required, at an increase in cost. Sizes of the windows are shown in diagram on pages 34 and 35.

DOUBLE·HUNG·WINDOWS

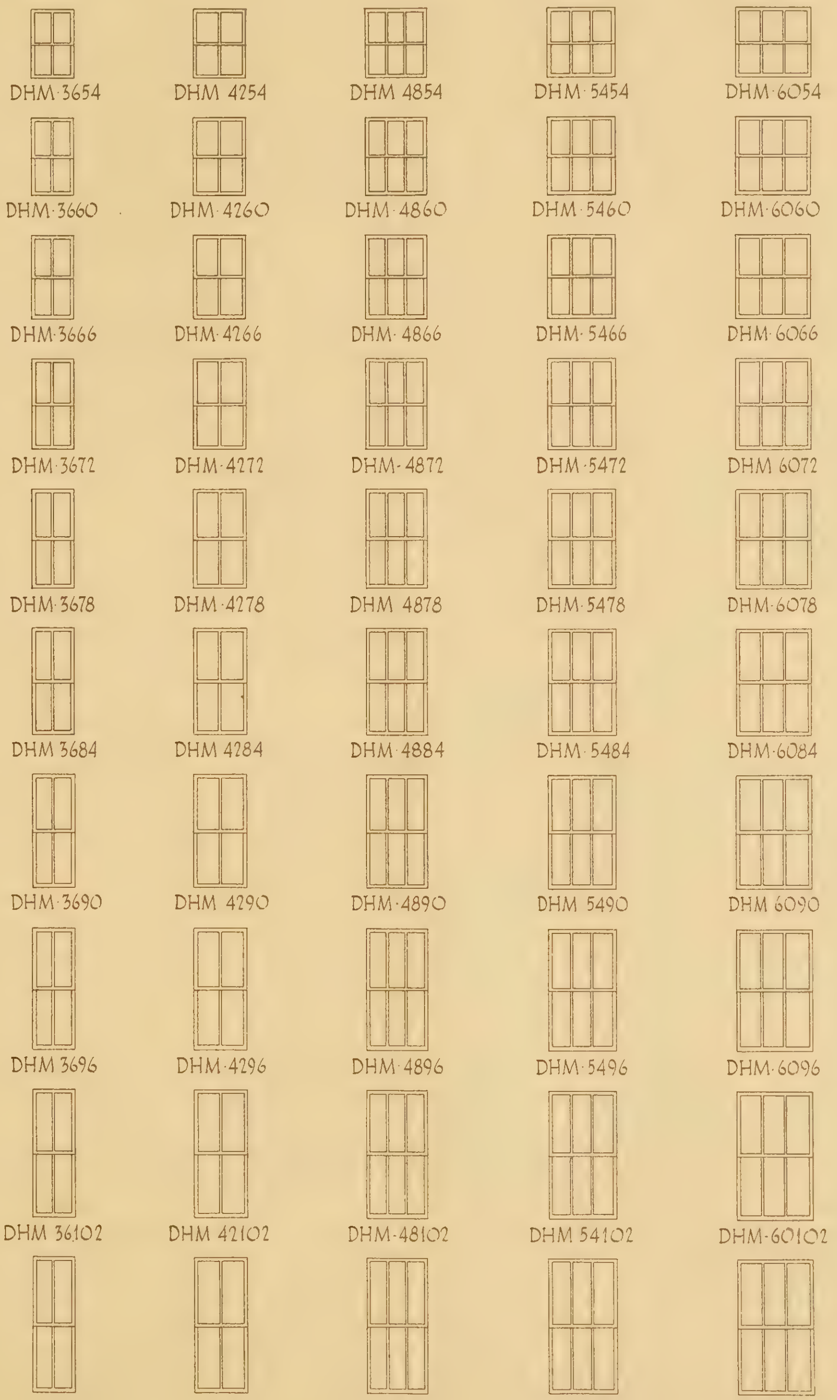
·TYPES·E·&·F·

STANDARD·TYPES·&·SIZES

NOMINAL·SIZE *	GLASS·SIZE	3'-0" 30½"	3'-6" 36½"	4'-0" 42½"	4'-6" 48½"	5'-0" 54½"
4' ~ 6"	23" 23"	DH·3654	DH·4254	DH·4854	DH·5454	DH·6054
5' ~ 0"	26" 26"	DH·3660	DH·4260	DH·4860	DH·5460	DH·6060
5' ~ 6"	29" 29"	DH·3666	DH·4266	DH·4866	DH·5466	DH·6066
6' ~ 0"	32" 32"	DH·3672	DH·4272	DH·4872	DH·5472	DH·6072
6" ~ 6"	35" 35"	DH·3678	DH·4278	DH·4878	DH·5478	DH·6078
7' ~ 0"	38" 38"	DH·3684	DH·4284	DH·4884	DH·5484	DH·6084
7' ~ 6"	41" 41"	DH 3690	DH·4290	DH·4890	DH·5490	DH·6090
8' ~ 0"	44" 44"	DH·3696	DH·4296	DH·4896	DH·5496	DH·6096
8' ~ 6"	47" 47"	DH·36102	DH 42102	DH·48102	DH·54102	DH 60102
9' ~ 0	50" 50"	DH·36108	DH·42108	DH·48108	DH·54108	DH·60108

*Nominal·Size equals·Masonry Opening·required·for·one·unit.

DOUBLE·HUNG·WINDOWS
TYPES·E·&·F – WITH·MUNTINS
LISTED·SPECIAL·TYPES·IN·STANDARD·SIZES

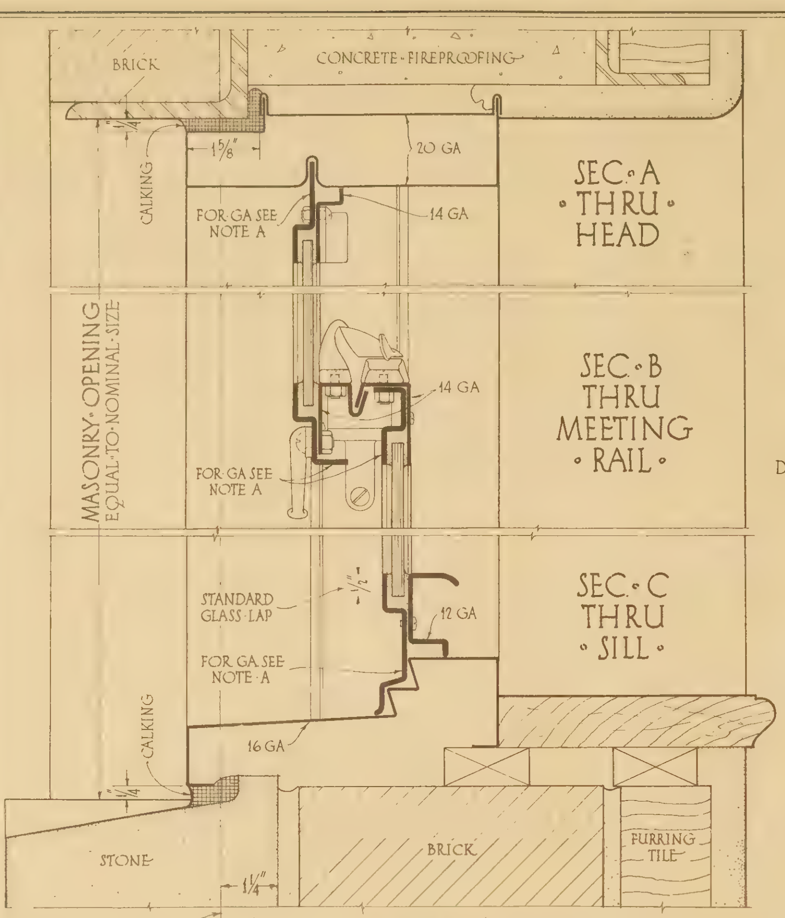


NOMINAL·SIZE *	GLASS·SIZE	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"
		15" 15"	18" 18"	13¾" 13¾" 13¾"	15¾" 15¾" 15¾"	17¾" 17¾" 17¾"
4' ~ 6"	23" 23"	DHM·3654	DHM 4254	DHM 4854	DHM·5454	DHM·6054
5' ~ 0"	26" 26"	DHM·3660	DHM·4260	DHM·4860	DHM·5460	DHM·6060
5' ~ 6"	29" 29"	DHM·3666	DHM·4266	DHM·4866	DHM·5466	DHM·6066
6' ~ 0"	32" 32"	DHM·3672	DHM·4272	DHM·4872	DHM·5472	DHM 6072
6' ~ 6"	35" 35"	DHM·3678	DHM·4278	DHM 4878	DHM·5478	DHM·6078
7' ~ 0"	38" 38"	DHM 3684	DHM 4284	DHM·4884	DHM·5484	DHM·6084
7' ~ 6"	41" 41"	DHM·3690	DHM 4290	DHM·4890	DHM 5490	DHM 6090
8' ~ 0"	44" 44"	DHM 3696	DHM·4296	DHM·4896	DHM·5496	DHM·6096
8' ~ 6"	47" 47"	DHM 36102	DHM 42102	DHM·48102	DHM 54102	DHM·60102
9' ~ 0"	50 50"	DHM·36108	DHM·42108	DHM 48108	DHM·54108	DHM·60108

* Nominal·Size·equals·Masonry Opening·required·for·one·unit.

DOUBLE·HUNG·WINDOWS DETAILS ~ TYPE·E

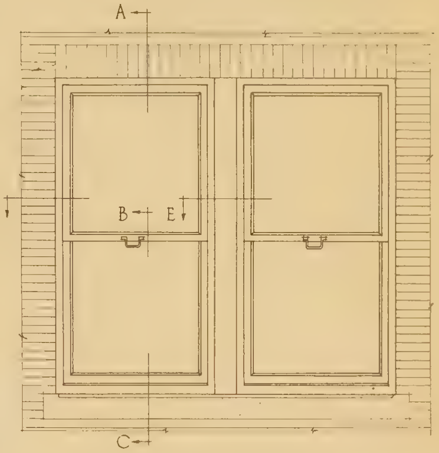
SCALE·FOR·DETAILS ~ 3" = 1'-0"



SEC·A THRU HEAD

SEC·B THRU MEETING RAIL

SEC·C THRU SILL



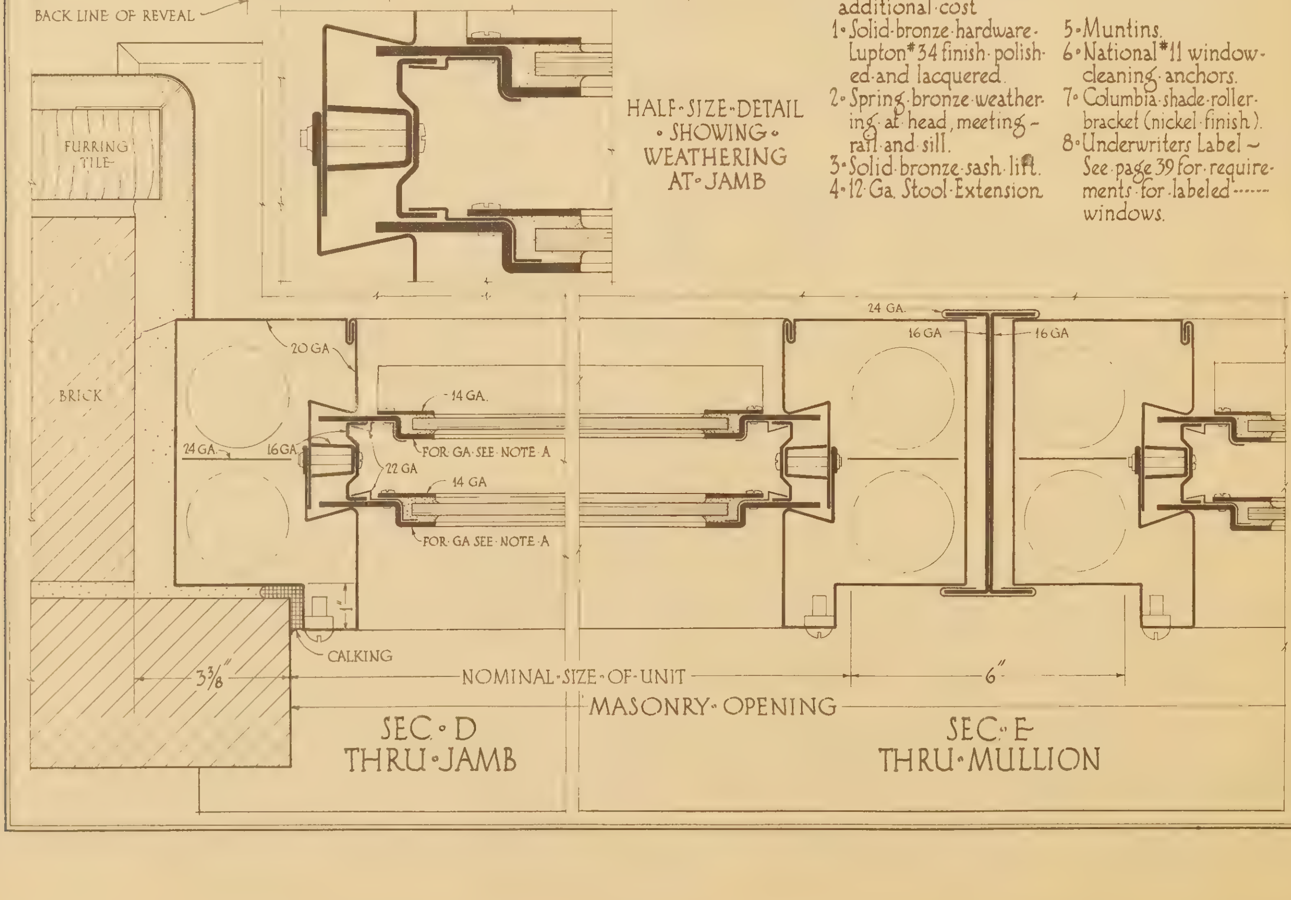
ELEVATION
SCALE ~ 1/4" = 1'-0"

NOTES

A· Sash rails are 14 Ga. on windows up to and including those 4'-0" wide.
Sash rails are 12 Ga. on windows over 4'-0" wide.

B· Extras furnished on both E & F windows at an additional cost

1· Solid bronze hardware. Lupton #34 finish polished and lacquered.
2· Spring bronze weathering at head, meeting rail and sill.
3· Solid bronze sash lift.
4· 12 Ga. Stool Extension.
5· Muntins.
6· National #11 window cleaning anchors.
7· Columbia shade roller bracket (nickel finish).
8· Underwriters Label ~ See page 39 for requirements for labeled windows.



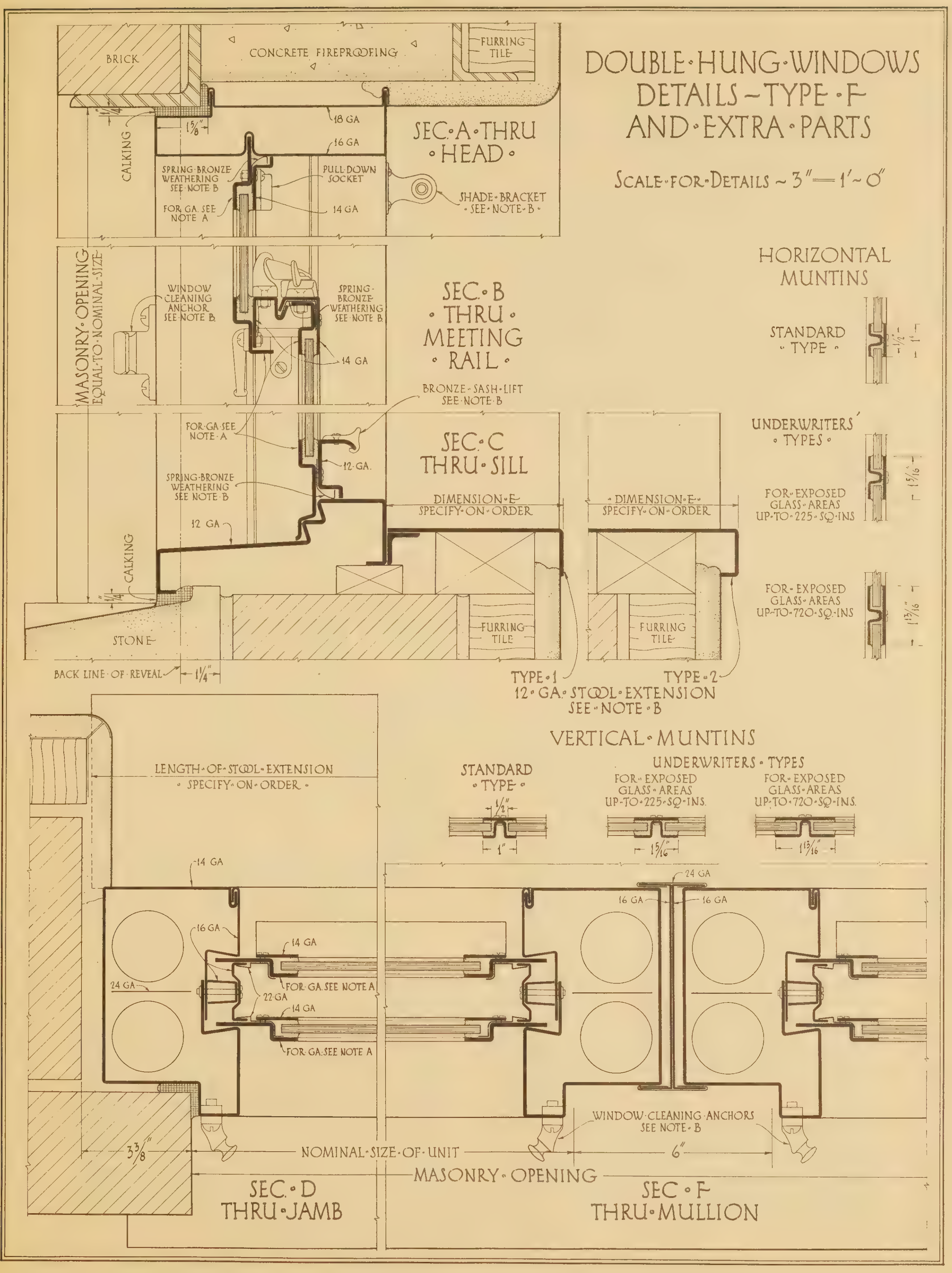
HALF·SIZE·DETAIL ·SHOWING· WEATHERING AT·JAMB

SEC·D THRU·JAMB

SEC·E THRU·MULLION

DOUBLE-HUNG-WINDOWS DETAILS—TYPE-F AND-EXTRA-PARTS

SCALE-FOR-DETAILS ~ 3″ = 1′~0″



SPECIFICATIONS

LUPTON DOUBLE HUNG WINDOWS TYPES E & F

WORK INCLUDED

1 Furnish and install where shown on drawings, Lupton Steel Double Hung Windows manufactured by David Lupton's Sons Co., Philadelphia.

Note: All Double Hung Windows should be accurately listed and located either in schedules, on plans or in specifications. If more than one type of window, or more than one type of hardware be desired, each type should be separately listed and located or otherwise clearly designated. These details assure greater accuracy in estimates.

SHOP DRAWINGS

2 Submit in triplicate, for the approval of the supervising architect, complete shop and installation drawings. These shall show scaled sections of window and frame members, details of construction, hardware, anchoring, etc.

MATERIALS

3 Sash members shall be of 14 ga. on windows up to 4′ 0″ wide, and 12 ga. on windows over 4′ 0″ wide. Glazing strips shall be 14 ga. for all rails except bottom rail. The glazing strip for the bottom rail shall be 12 ga. All sash members shall be cold galvanized strip steel.

4 Frame members (E Type)—Head, head cover, jamb box and removable jamb piece shall be made of 20 ga. and the sill of 16 ga. All frame members shall be hot galvanized, dull-coated steel sheets.

5 Frame members (F Type)—The head shall be made of 16 ga., the head cover of 18 ga., the sill of 12 ga., the jamb box proper of 14 ga. and the removable jamb piece of 16 ga. All frame members shall be hot galvanized, dull-coated steel sheets.

6 Parting Strips shall be made of 16 ga. cold galvanized strip steel.

7 Muntin Bars shall be made of 16 ga. cold galvanized strip steel.

8 Muntin Glazing Strips shall be made of 14 ga. cold galvanized strip steel.

CONSTRUCTION

9 Sash members shall be designed with flanges to enter groove in head and jamb boxes. The bottom rail of the lower sash shall form a double contact with the sill member. The meeting rail shall interlock. The sash members shall be mitered and arc welded at all corners.

10 Frame members—The head (exclusive of cover) and sill shall each be made of one piece of steel. The jamb box shall consist of three parts: (1) the box proper, (2) a removable piece for access to weights, (3) a parting strip. The removable piece and the parting strip shall each be in two sections with the joint at the level of the meeting rail. The sash weights shall be separated by a division strip. The frame members shall be coped to fit each other at corners and arc welded.

11 Muntin bars shall be spotwelded to sash members.

12 Muntin Glazing Strips are attached to muntins with low round-head machine screws.

13 Weather Stripping of 22 ga. steel, galvanized, shall be furnished for the jambs.

Note: Additional spring bronze weathering at head, meeting rail and sill, is furnished when specified at slight added cost.

ATTACHED HARDWARE

14 Each window shall be equipped with two pulleys machined from cold-rolled steel. The pulleys shall have oilless bearings and shall be set in a 12 ga. steel pulley pan. The sash chain shall be American Chain Co. No. 130 Galvanized Sash Chain.

15 The Glazing Strip for the bottom rail of the lower sash shall act as a continuous lift.

SPECIFICATIONS (Continued)

UNATTACHED HARDWARE

16 The following hardware shall be shipped unattached and carefully packed to prevent damage until applied for use.

17 Meeting Rail Locks shall have cam action and shall be malleable iron with cold galvanized Lupton No. 70 finish.

18 Pull-Down Handle shall be malleable iron, cold galvanized Lupton No. 70 finish, for attaching to lower rail of top sash.

19 Pull-Down Socket shall be malleable iron, cold galvanized Lupton No. 70 finish, for attaching to upper rail of top sash for pole operation.

CALKING CEMENT

20 The window manufacturer shall furnish a sufficient quantity of non-staining calking cement to make Head, Sill and Jambs weather tight.

ERECTION

Note: Lupton Double Hung Windows (Types E and F) are shipped assembled with the sash raised and wired to the head. The chain is wired tight inside the jamb box, and the sash weights are shipped unattached.

21 All Lupton Double Hung Windows shall be erected in prepared openings by the window contractor, unless otherwise specified. They shall be set plumb and true and securely fastened in place before glazing.

Note: Include in the masonry specification that all masonry openings shall be accurately constructed in accordance with the installation details for Lupton Double Hung Windows, and that all mortar, grouting, pointing, etc., shall be done by the mason contractor after windows have been erected.

22 The windows shall have the calking cement neatly applied where they come in contact with the building construction.

PAINTING

23 All windows shall receive one coat of window manufacturers standard gray galvanized metal primer in the factory.

Note: The following should be provided in the paint specification:

One additional coat of paint should be applied after erection before glazing. Further painting should be deferred until at least three weeks after glazing to allow putty to set. One or more additional coats may then be applied.

GLASS AND GLAZING

Note: Specify glass and glazing under proper heading elsewhere in specifications.

(a) Do not specify single thickness glass.

(b) Specify high-grade steel window putty (ordinary wood sash putty must not be used).

(c) Specify that all Lupton Steel Double Hung Windows shall be glazed from the inside; that all glass shall be set in a bed of putty and fastened in place by 14 ga. glazing strips which in turn are secured by low round-head machine screws; and that the putty shall be finished in a neat, clean manner.

REQUIREMENTS FOR UNDERWRITERS' LABELS

1 Both Types E and F Windows may be labeled.

2 Maximum size of unit is 6′ 0″ wide and 10′ 0″ high.

3 Multiple unit openings require mullions anchored at head and sill.

4 The maximum exposed glass area is 720 square inches, with a maximum horizontal dimension of 48″ and a maximum vertical dimension of 54″.

5 Sash locks must be malleable iron.

6 Weather-stripping at head, meeting rail, and sill is optional.

GAUGES OF METAL USED IN TYPES E AND F WINDOWS

FRAMES	Type E	Type F
Head	20 Gauge	16 Gauge
Head Cover	20 "	18 "
Jamb Box	20 "	14 "
Removable Jamb Piece	20 "	16 "
Sill	16 "	12 "

Material—Hot galvanized dull-coated steel sheets.

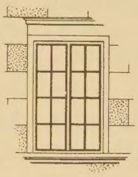
SASH	Type E	Type F
Sash Members, up to 4′ 0″ wide	14 Gauge	14 Gauge
Sash Members over 4′ 0″ wide	12 "	12 "
Glazing Strips, except bottom rail	14 "	14 "
Glazing Strip for bottom rail	12 "	12 "

Material—Cold galvanized strip steel.

PARTING STRIPS	16 Gauge	16 Gauge

Material—Cold galvanized strip steel.

OTHER LUPTON PRODUCTS

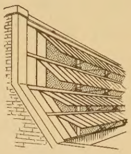


LUPTON CASEMENTS

Heavy Type. The highest-grade steel windows for banks, libraries, clubs, office buildings or fine residences. They are made in six standard types, and can be furnished to suit any size or shape of opening.

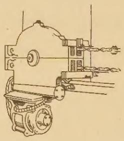
POND CONTINUOUS WINDOWS

These windows form a transparent, weather-protecting shelter over a continuous opening, and give remarkable efficiency in the natural lighting and ventilation of industrial buildings. Long runs are readily controlled by Pond Operating Device.



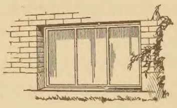
LUPTON RESIDENCE CASEMENT WINDOWS

Made from one-piece copper steel members, with extended hinge which permits cleaning both sides of the glass from within the room.



POND OPERATING DEVICE

Employing the tension principle, Pond Operating Device has no equal for operating runs of top-hung windows or large groups of pivoted windows. Free from useless stresses. Gives efficient mass control and exceptionally long service.

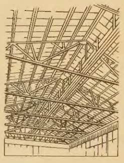


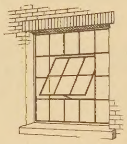
LUPTON BASEMENT WINDOWS

The modern windows for basements and small window openings generally. Sturdy, durable and inexpensive. Five standard sizes in stock.

LUPTON ROLLED STEEL SKYLIGHTS

Built to stand severe service. The glass is held between strips of specially treated fibre, eliminating breakage due to vibration and wide range of temperature. The cap is either of copper or galvanized steel, the base of steel.



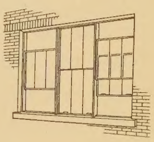


LUPTON PIVOTED WINDOWS

The standard and accepted steel windows for factories, stores, garages, warehouses and all sorts of business buildings. Rigidly built of solid steel rolled sections. Made in thirty-nine stock sizes for immediate shipment.

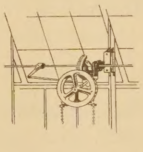
LUPTON COUNTER-BALANCED WINDOWS

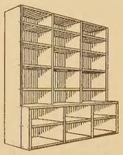
These windows make balanced ventilation automatic. When the lower sash is opened, the upper sash lowers an equal distance, thus providing an entrance for fresh air and an exit for exhausted air at the same time.



LUPTON OPERATING DEVICE

A device designed on the torsion principle which gives efficient control of sidewall pivoted windows in medium length runs. May be equally well applied to windows already installed. Manual operation.





LUPTON STEEL SHELVING

A type suited to every storage requirement. Storage Shelving for mills; Display and Unit Shelving for stores and offices; Racks for special requirements; all cut maintenance costs, conserve floor space and simplify store keeping.

LUPTON STEEL FACTORY, STORE AND OFFICE EQUIPMENT

Made of smooth, durable steel, Lupton Shop Desks, Bench Legs, Bench Drawers, Tool Cabinets, Stationery Cabinets, Display Counter, etc., give lasting investment value. Easily kept clean.

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